A DEMONSTRATION OF THE EXISTENCE of GOD:

DEDUCED

From the Knowledge of NATURE, and more particularly from that of MAN.

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Tranſlated from the French,
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O LORD, how manifold are thy works! in wiſdom haſt thou made them all. PSALM civ. 24.

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THE FRENCH EDITOR's PREFACE.

NOTHING is more ſhameful for human nature, or more betrays the corruption of it, than the neceſſity, which pious men have at all times ſeen, of writing to prove the exiſtence of GOD. Reaſon, indeed, is not yet impaired to ſuch a degree, in any man, as entirely to miſtake its own origin, and be ignorant of a truth, which the great author of it has ſo carefully engraven on every part of his work. To be conſcious of our own exiſtence, is in a manner to know that GOD exiſts. The idea of ourſelves

is ſo perfectly connected with the idea of God, that a very ſlight examination of the firſt, neceſſarily leads us far into the light and luſtre of the latter. We cannot poſſibly avoid being ſo much irradiated by its brightneſs, that, though there may be hypocrites in the profeſſion of atheiſm, there never was, nor can be, a true atheiſt. Our opinion of the diſingenuity of theſe impious men, is founded on the open confeſſion which the moſt determined amongſt them have a thouſand times made, that they cannot forbear believing the exiſtence of a God, in ſpite of all the pains they took to root out this belief in others. Neither the ſmall number of thoſe who have been leſs ſincere, nor the mad fury of three or four, who were ſo daring as to maintain their impiety in the inſtant of death, is ſufficient to invalidate the complete proof reſulting from this confeſſion. Diſſimulation may be carried

to

to a very great length. A vain fondneſs of falſe glory, with a ſort of unaccountable rage that gets poſſeſſion of a ſoul which GOD has abandoned, are apt to tranſport it beyond itſelf, and hurry it on to render its crime as atrocious as poſſible. The deſpair of a man, who cannot really doubt the exiſtence of a GOD, whatever he may have pretended; who is juſt on the verge of eternity, ready to fall under the rigour of divine juſtice; and who, notwithſtanding, refuſes to reconcile himſelf with this GOD, whom he has blaſphemed; is indeed a more extravagant diſpoſition of mind, than all the other inſtances of obſtinate diſſimulation among profeſſed atheiſts: and yet, even this deſperate defiance of the Supreme Being is but too frequent.

IT is certain, therefore, that as there are no real atheiſts, books aſſerting the exiſtence of a GOD are not written for

them. When an author undertakes to prove this exiſtence, it is not in order to undeceive men who are fully convinced of the contrary, but only to confirm ſuch as are wavering in their faith. Nor is it to defeat an eſtabliſhed error, but only to prevent and diſſipate doubts. But ought this, in the leaſt, to leſſen our ſhame? Ought we not to bluſh as readily for the crime of an impious man, as for the obſtinate blindneſs of a real atheiſt? And if the weakneſs of an underſtanding, from whom the moſt evident truths ſhould be entirely hid, would be a diſhonour to human nature; does the perverſeneſs of a heart, which voluntarily glories in the ſame ignorance, when it knows better, and thinks it brave to oppoſe at once the light of nature, and its own ſentiments, bring leſs diſgrace upon our ſpecies? How ought we to abhor thoſe profligate men, who are rebels to the firſt of all ſove-

reigns,

reigns, and ingrateful towards the moſt liberal of all benefactors; who, at the ſame time that they are perſuaded of his exiſtence, endeavour to eradicate this perſuaſion from their own minds; who ſtrive againſt full conviction, and labour continually to raiſe clouds before that pure light which they cannot extinguiſh; who exhauſt their wits to invent ſyſtems, which may cauſe others at leaſt to doubt, and ſo augment the number of the diffident and incredulous? This is, indeed, the only wretched reſource they have left, in order to calm the remorſe of their own conſciences, and, if poſſible, to give an air of probability to infidelity, by the imaginary multitude of infidels. But how vain are all their efforts! Every other truth is ſo cloſely connected with this firſt truth, that there is not one of them which has not a tendency to prove it. The mind can contemplate nothing which does not offer GOD to its view.

Tho' the metaphyſician bewilders himſelf in the ſubtilties of his abſtruſe ſcience, tho' he purſues tracks in which very few can follow him; yet ſtill he meets GOD in his way. Though the mathematician buſies himſelf altogether with bodies, and their dimenſions obvious to ſenſe; yet even in theſe he diſcovers GOD, though GOD be a ſpirit. Let the lover of hiſtory load his memory with various events, he cannot, amidſt the crowd, overlook the wiſdom, juſtice, and goodneſs of GOD, who is the ſovereign diſpoſer of all events. The hiſtory of religion, to which he ſees all things elſe directed by a ſupreme intelligence, becomes an irreſiſtible demonſtration that ſuch an intelligence exiſts. The traveller may wander through divers countries, and he will find that GOD is every where known, though the ideas of him are in ſome places very confuſed: but this, however, is ſufficient to convince him,

that

that nothing but a brute can be ignorant of GOD's exiſtence.

BUT the moſt evident of all proofs, is that which is drawn from the knowledge of the univerſe, and the knowledge of man in particular. We learn from St. Paul, and from the Wiſe Man, or rather from the Holy Ghoſt, whoſe organs they both were, that philoſophers were convinced by this demonſtration; which is ſufficient to convince every attentive man. This argument is diſplayed in ſo many places throughout the Pſalms, and the Royal Prophet is ſo very ſublime and moving when he expatiates on it, that we ſee plainly his whole heart is warmed with what he delivers. The holy Fathers were ſo well acquainted with the force of it, that, in full confidence it was an irreſiſtible defence againſt impiety, they omitted nothing that might contribute to ſet it in a clear and full light.

light. Lactantius, in his book of the works of GOD; St. Athanaſius, in his treatiſe againſt the Gentiles; St. Gregory of Nazianzen, in his 34th ſermon; St. Baſil, and St. Gregory of Niſſa, in their expoſition of the firſt chapter of Geneſis; have employed all their eloquence to render this demonſtration ſenſible. Grenada, in his catechiſm, enlarges more upon it than any one of thoſe holy doctors: he even deſcends into the moſt minute particulars, in order to make this proof familiar.

AFTER ſo many great men, the author of the following work has applied himſelf to ſearch this argument to the bottom; to ſupport it by the principles of the moſt rational philoſophy; and, at the ſame time, to adapt it to the meaneſt capacity. There are few men in our age capable of executing ſo great a deſign: but this writer, who formed the plan,

plan, has ſucceeded perfectly well in the execution of it. It required a ſublime genius, in order to penetrate all the ſecret ſprings of nature, and unfold its beauties. It required an eloquence, at once abundant, various, eaſy, ſoft, and inſinuating, to render thoſe beauties ſenſible; to bring down the moſt elevated philoſophy to the level of the people, and to render the heights of the myſtery of GOD acceſſible to all mankind. It required a genius equally firm and ſubtle, to foreſee and obviate all the cavils of the impious. Theſe great qualities appear united in the preſent work, and diſcover the author, whoſe very ſtile without thoſe advantages, would have diſtinguiſhed him from all other writers.

IT is a pity the publick cannot reap the advantage of his labours, unleſs they are

are obtained from him by ſtealth*. If he had been pleaſed to reviſe the piece now before us, he might, perhaps, have perceived ſome defects in it, which ſcarce any body elſe will diſcover.

UPON the whole, this treatiſe, ſuch as it appears, is certainly the beſt that is extant of the kind. If the refined taſte of the illuſtrious author ſhould find in it ſomething that may be improved, I ſuſpect his delicacy would, in this inſtance, be ſcrupulous beyond meaſure. It would even be a doubt with me, whether his modeſty would not, for once, get the better of his excellent judgment.

* The original of this work was publiſhed in the Author's life-time. M. DE CAMBRAY died in 1715.

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A DE-

Don't forget the enquire
whether like-notes must
be stamped —

A DEMONSTRATION OF THE EXISTENCE of GOD.

SECT. I.

The metaphyſical proofs of the exiſtence of GOD *are not capable of being underſtood by the generality of mankind.*

I CANNOT open my eyes, without admiring that art, which ſhines forth through all nature. The ſlighteſt glance is ſufficient to perceive the hand of a Creator.

LET men accuſtomed to meditate abſtruſe truths, and trace things to their firſt principles, endeavour to know GOD by his idea. I will not deny, that this is a ſure way of arriving at the ſource or all truth. But the ſhorter and directer it is, the more inacceſſible and rough it muſt be to the generality of men, who depend only on their ſenſes.

IT is ſo ſimple a demonſtration, that, by its very ſimplicity, it eſcapes minds incapable of operations purely intellectual. The more perfect this method of inveſtigating the ſupreme Being is, the fewer there are capable to make uſe of it.

SECT.

SECT. II.

The moral proofs of the exiſtence of GOD *are evident to the meaneſt capacity.*

BUT there is another way leſs perfect, proportioned to men of the loweſt rank. Thoſe the leaſt acquainted with the uſe of reaſon, or the moſt attached to ſenſual prejudices, may at one view diſcover that Being, who has revealed himſelf in all his works. The wiſdom and power he has ſhewn in every thing he has produced, diſplay themſelves as in a mirror to thoſe who cannot contemplate his purer eſſence. This is a popular and ſenſible philoſophy, which every diſpaſſionate and unprejudiced man is capable of. "The human ſoul (ſays "Auguſtine) is rational; but being fet-"tered by theſe chains, which are the "puniſhment of ſin, is reduced to that

" low ſtate, as by conjectures on viſible
" objects to ſtrive to attain to the know-
" ledge of inviſible things *."

SECT. III.

Why ſo few perſons give attention to the proofs nature furniſhes of the exiſtence of GOD.

IF many men of a learned and penetrating genius have failed to diſcover GOD by this comprehenſive view of all nature, we muſt not be ſurpriſed. The paſſions which agitate and engroſs them, put them in continual diſtraction; or elſe the falſe prejudices ariſing from the paſſions have ſhut their eyes to this grand ſpectacle.

* Humana autem anima rationalis eſt, quæ mortalibus vinculis peccati pœna tenebatur, ad hoc diminutionis redacta, ut per conjecturas rerum viſibilium ad intelligenda inviſibilia niteretur. AUGUST. de Lib. Arbit. lib. iii.

ſpectacle *. A man eagerly intereſted in an affair of conſequence, which takes up his entire thought, would paſs ſeveral days in a room in adjuſting his affairs, without minding either the proportions of the apartments, the ornaments of the chimney, or the pictures which ſurrounded him. All theſe objects, though conſtantly preſent to his eyes, would make no impreſſion upon him. In this manner live mankind. Every thing preſents them the Deity, yet they can ſee him on no ſide. "He was in the world, "(ſays St. John) and by him the world "was made; and yet the world knew "him not †." Men paſs their life, without having ſeen this ſenſible repreſenta-

* Ipſius vero mundi, qui omnia complexu coercet & continet, non artificit ſolum, ſed plane artifex, ab eodem Zenone, dicitur; conſultrix & provida utilitatum, opportunitatumque omnium. CICERO, de Nat. Deor. lib. ii.

† John i. 10.

tion of the Divinity; ſo much the faſcination of the ſenſes blinds the eyes of the underſtanding. Often, indeed, they will not open them; but affect to keep them cloſed, for fear of finding him they do not ſeek. Laſtly, what ſhould contribute moſt to clear their ſight, tends only to cloud it the more. I mean the conſtancy and regularity of thoſe motions, which the divine wiſdom has eſtabliſhed in the univerſe. "Theſe "things grow contemptible by cuſ-"tom *." Cicero talks exactly in the ſame ſtyle: "By ſeeing every day (ſays "he) the ſame objects, the mind grows "accuſtomed to them, as well as the "eyes. It neither admires, nor gives "itſelf the trouble to ſearch the cauſe "of thoſe effects, which daily appear "without variation. As if the novelty, "not the grandeur of things, ſhould "excite

* Aſſiduitate viluerant.

" excite our curioſity to inquire into " their original *."

SECT. IV.

All nature ſhews the exiſtence of its author.

THE infinite art of the Creator is viſible thro' all nature. By art, I mean an aſſemblage of means expreſly choſen to arrive at an appointed end; an order, an arrangement, a contrivance; in a word, a formed deſign. Chance, on the contrary, is a blind and neceſſary cauſe; which can neither prepare, diſpoſe, nor ſelect any thing; having neither will nor intelligence. Now I maintain, that the univerſe bears the

 marks

* Sed aſſiduitate quotidiana & conſuetudine oculorum aſſueſcunt animi, neque admirantur, neque requirunt rationem earum rerum, quas ſemper vident; perinde quaſi novitas nos magis quam magnitudo rerum debeat ad exquirendas cauſas excitare.

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marks of a power or cauſe infinitely powerful and wiſe. I affirm, that chance, that is to ſay, a blind fortuitous concourſe of neceſſary cauſes, ſtripped of reaſon, could never form this whole *. It is therefore proper here, to lay before the reader ſeveral compariſons drawn from the antients.

SECT. V.

Beautiful compariſons, which demonſtrate the being of GOD.

Compariſon i. Taken from the Iliad of Homer.

WHO would believe that Homer's Iliad, that maſterly poem, which bears ſuch characters of perfection, was never compoſed by an exertion of genius

* In quibus nulla temeritas, ſed ordo apparet, & artis quædam ſimilitudo. CICERO, de Nat. Deor. lib. ii.

nius in that great poet; but that the letters of the alphabet being thrown together in confuſion, a pure ſtroke of hazard (like a caſt of the dye) reaſſembled theſe letters preciſely in the order neceſſary to compoſe in verſe, full of harmony and variety, ſo many grand events! To place and connect them ſo juſtly together, and deſcribe each object in the moſt attractive, noble, and engaging light; in fine, to make every perſon ſuſtain his character in ſo natural and lively a manner! Reaſon and ſubtilize as much as you will, you will never perſuade a man in his ſenſes, that the Iliad had no author but chance. Cicero ſays the ſame thing of the Annals of Ennius *; and adds, that hazard could never produce a ſingle diſtich; much leſs, an entire poem. Why then will this judicious writer believe of the univerſe (without diſpute, a more marvellous

* CICERO, de Nat. Deor. lib. ii.

vellous work than the Iliad) what his good ſenſe would not allow him to think of this poem? But let us paſs to a ſecond compariſon, taken from St. Gregory Nazianzen.

SECT. VI.

Compariſon ii. Taken from the ſound of inſtruments.

WERE we to hear in a chamber, behind a curtain, a ſoft and harmonious inſtrument; could we imagine, that chance, without any human aſſiſtance, had formed this inſtrument? Did ever any man ſay, that the ſtrings of a violin voluntarily came to place themſelves in order, ſtretched along an inſtrument, whoſe pieces are put together to form a cavity with regular overtures? Shall we aſſert, that the bow, made without ſkill, was moved by the wind to touch

touch each ſtring ſo diſtinctly and juſtly? What reaſonable mind can ſeriouſly doubt, but a human hand touches this inſtrument, with ſo much harmony? Will not the auditor cry, It is a maſterly hand? We are never weary of diſcovering the ſame truth.

SECT. VII.

Compariſon iii. Drawn from ſtatuary.

WHOEVER ſhould find in a deſert and unknown iſland an exquiſite ſtatue of marble, would certainly reaſon thus: Doubtleſs, this place was once inhabited. I ſee, in this piece before me, the hand of a curious ſculptor; I admire the delicacy, with which he has proportioned all the parts of this figure, to give them ſo much grace, majeſty, life, tenderneſs, motion, and action.

WHAT would this man ſay, if ſomebody took in their head to tell him: "No; this ſtatue was never the work "of an artiſt. It is true, it is made in "the moſt perfect taſte, and according "to all the rules of art; but it is all "the effect of chance. Amongſt ma-"ny pieces of marble, one aſſumed that "ſhape by mere hazard; a violent "ſtorm carried it directly to this pe-"deſtal, which of itſelf ſtood ready to "receive it. Suppoſe it a Venus, equal "to that of Medicis; or a Hercules, "like the Farneſian. You think this "image ready to move, and animated "with life; but it owes nothing to art. "A blind ſtroke of chance alone has "finiſhed and placed it in the manner "you ſee."

SECT.

SECT. VIII.

Compariſon iv. Derived from painting.

IF a perſon ſhould ſee a fine picture, for example, ſome capital piece repreſenting the paſſage of the Red-Sea, by Moſes, at whoſe command the waters ſeparate and riſe like two walls, to form a dry road for the Iſraelites through the watery abyſſes: on one hand you ſee this numberleſs multitude of people, full of joy and confidence, lifting up their hands to heaven: on the other, appear Pharaoh and his Egyptians, full of trouble and amazement at the view of the waves, which unite again together to ſwallow them up: would not ſuch a beholder laugh at the man who ſhould ſeriouſly tell him, that a ſervant-girl accidentally daubing the canvas with her bruſh, the colours ranged themſelves in order,

order, and produced thoſe lively tints, thoſe varied attitudes, thoſe paſſionate looks; that fine diſpoſition or grouping of ſo many figures without confuſion; that nicety and eaſe in the draperies; that juſt diſtribution of lights, and ſhades; and that exact perſpective; in ſhort, every thing that the moſt maſterly genius in painting could produce? Indeed, were the queſtion only about a little froth on a horſe's mouth, I own (according to the relation given of it) and can ſuppoſe it without examining, that a ſtroke of a pencil, given by the painter in his anger, might for once happen to hit right. But, at leaſt we muſt allow, he had choſen the proper colours to repreſent this froth; and that they then lay on his pencil; ſo that even here chance had but a ſlender ſhare in what art had begun. Beſides, this very production of chance and art together, was but a little froth; a confuſed

object,

object, fit only to do honour to an accidental ſtroke, which required only a little white dropped from the point of the pencil, without any preciſe figure, or correctneſs of deſign. What compariſon then can there be between this, and an hiſtorical piece, where the moſt fruitful imagination, and the moſt enterpriſing genius, ſupported by a knowledge of the rules of art, ſcarce ſuffice to execute ſuch an excellent deſign? I cannot quit theſe examples, without intreating the reader to obſerve, that the wiſeſt men have an extreme reluctance to believe, that beaſts are deſtitute of all ſenſe, and only pure machines. Whence ariſes this? It is becauſe they juſtly ſuppoſe, that motions ſo exact, and ſo agreeable to the laws of mechaniſm, could never be produced without ſome ingenuity; and that matter alone, without art, can form nothing which diſcovers ſo much knowledge. Hence

we

we plainly ſee, that right reaſon naturally concludes, that ſimple matter cannot either by the plain laws of motion, or the capricious ſtrokes of chance, produce animals which are only bare machines. Even the philoſophers, who denied all knowledge to beaſts, could not avoid acknowledging, that what they ſuppoſed blind and void of art in theſe machines, is full of wiſdom and contrivance in the firſt mover who formed their ſprings, and regulated their motions. Thus the moſt oppoſite philoſophers equally confeſs, that matter and chance, without art, are incapable of producing what we ſee in the animal creation.

SECT.

SECT. IX.

A particular inquiry into nature.

AFTER theſe compariſons, concerning which I beg the reader would ſimply conſult himſelf, without reaſoning; I think it now time to enter into a detail of nature: not that I pretend to penetrate it thoroughly. That were an impoſſible taſk. I do not even pretend to enter into any phyſical diſquiſition. Theſe diſcuſſions ſuppoſe a depth of knowledge, which many perſons of ſenſe are deſtitute of; and I only want to repreſent the face of nature, as it were, in a tranſient view. I would only lay before them, what all the world knows, and which requires but a ſmall degree of calm and ſerious attention to underſtand.

SECT. X.

Of the general ſtructure of the univerſe.

LET us ſtop a little, to conſider that grand object which attracts our firſt notice; I mean, the general ſtructure of the univerſe. Let us caſt our eyes on the earth, which bears us. Let us regard the immenſe arch of heaven, which ſurrounds us; and thoſe ſtarry orbs, which give us light. A man who lives without reflection, thinks only of the ſpaces near him, or which have ſome relation to his wants: he looks on the earth in the ſame light as he does on the floor of his room; and the ſun is no more to him by day, than the lamp he burns at night: his ſentiments do not extend an inch beyond his ſituation. On the contrary, a man of judgment carries his views farther, and conſiders, with

with a mixture of curioſity and amazement, the infinite ſpace in which he is placed. A vaſt empire then appears no more to him, than a ſmall corner of the earth; the earth itſelf looks like a point, compared with the univerſe; in which he is ſurpriſed to ſee himſelf placed, without knowing how he came there.

SECT. XI.

Of the earth.

WHAT hand has ſuſpended this globe of the earth immoveable in the air? Who has laid its foundations? Nothing in appearance is more viſible; ſince the greateſt wretches trample it beneath their feet. Yet, to poſſeſs it, we grudge not the greateſt treaſures. Were it harder, man would be unable to cultivate or improve it: were it ſofter, it would be inſufficient to bear him;

he would ſink every-where like one on the ſands, or in a quagmire. It is out of the inexhauſtible boſom of the earth, that we draw every thing valuable and precious. This ſhapeleſs, contemptible, and groſs maſs, aſſumes the moſt various forms, and yields us ſucceſſively all the bleſſings we deſire. This filthy dirt transforms itſelf into a thouſand charming objects. In one year it becomes branches, buds, leaves, flowers, fruits, ſeeds; thus renewing its bounty in favour of mankind. Nothing exhauſts it. The more you labour and till it, the more it yields. After being for ſo many ages the mother of abundance; the earth is ſtill young, and diſcovers no marks of old age. Her bowels are ſtill full of the ſame treaſures. A thouſand generations have paſſed in her boſom. Every thing grows old, except her; for every ſpring ſhe conſtantly renews her face. She is not want-

ing

ing to mankind, but fooliſh man is his own enemy, by neglecting to cultivate her. It is by his ſloth or irregularity, that briars and thorns riſe, where vintages and harveſts might flouriſh. Men diſpute an advantage they neglect. Conquerors leave untilled the ground, for the poſſeſſion of which they have thrown away ſo many thouſand lives. Mankind have before them vaſt tracts of land, waſte and uncultivated; and yet the world is embroiled for a corner of this neglected land. The earth, were it duly cultivated, would maintain a hundred times the number of its preſent inhabitants. Even the inequality of ſoils, which at firſt ſight ſeems a defect, is in reality both ornamental and uſeful. The mountains are raiſed up, and the valleys depreſſed, in the places GOD has appointed. Theſe different regions, according to their various aſpects to the ſun, have their diſtinct advantages. The

deep vales yield freſh paſture for the cattle. Here ſpread the wide plains, covered with golden plenty. There the hills gently riſe like an amphitheatre, crowned with vines and fruit-trees. Beyond theſe, the towering mountains lift their ſnowy heads to the ſkies, and diſtil from their ſides, brooks and torrents, which become the ſource of rivers. The rocks, which ſhew their ſteep ridges, ſuſtain the earth of theſe mountains, as the bones of the human body do the fleſh. This variety forms a thouſand beautiful landſchapes, and at the ſame time anſwers all the different wants of mankind. There is no ſoil ſo ungrateful as to be abſolutely fit for nothing. Not only black and fertile moulds, but even clayey and ſandy grounds, fully reward the labourer's toil. Marſhes, dried up, become fruitful. As for ſands, they uſually cover only the ſurface of the earth; and when the huſbandman has

the

the patience to turn them up, he finds a freſh ſoil, which grows fruitful in proportion as it is ſtirred up, and expoſed to the rays of the ſun.

IN ſhort, no ground is intirely barren, if man will beſtow but a proper care in its culture; and demand no more from it, than it is capable of producing. In the midſt of rocks we find excellent pieces of paſturage. In theſe cavities there are veins, which the rays of the ſun penetrate; and which fill the plants with juices proper for the nouriſhment of the flocks. The ridges, which appear moſt wild and barren, often produce delicious fruits, or ſalutary remedies; which are not found, even in the moſt fertile countries: beſides, it is a remarkable proof of the wiſdom of Providence, that no country produces all that is neceſſary to human life. For mutual wants produce mutual commerce, by which

men reciprocally ſupply each other's neceſſities. Now, this indigence is the natural bond of ſociety between nations; otherwiſe, all the people of the world would be reduced to one kind of dreſs and food, and have no deſire to maintain any ſocial acquaintance or intercourſe with each other.

Sect. XII.

Of plants.

ALL that the earth produces, corrupting, returns into its boſom, and becomes the ſource of new fertility. Thus it reſumes all it has given, to reſtore it with intereſt. So the putrefaction of the plants, and the excrements of the animals it nouriſhes, nouriſh it in return, and improve its fecundity. Thus, the more it gives, the more it reſumes; nor is it ever waſted, provided

in its cultivation you know the right method to ſupply it. All things come out of its boſom, all return thither; yet nothing is loſt. The ſeeds, thrown into it, are multiplied. Intruſt the earth with grains of corn; theſe by rotting take root; and this fruitful mother returns with uſury more ears, than it received grains. Dig into her bowels, you will there find ſtone and marble for the nobleſt edifices. But who is HE, who has incloſed ſo many treaſures in the bowels of the earth, on condition they ſhould re-produce each other without end? Such are ſeveral kinds of precious and uſeful metals, as well as minerals, deſigned for the ſervice of mankind.

ADMIRE the plants ariſing from the earth, which furniſhes food to the healthy, and remedies to the ſick. Of theſe the ſpecies and virtues are numberleſs.

They

They adorn the face of nature. They afford verdure, odoriferous flowers, and delicious fruit. Regard theſe vaſt foreſts, which ſeem coeval with the world itſelf: the roots of theſe ſpread themſelves beneath the ground, as their tops aſcend to heaven. The former ſecure them againſt the ſtorms, and by their ſubterraneous fibres convey a proper nouriſhment to the body of the tree: this again is defended by a ſtrong bark to ſhelter the trunk from the injuries of the air. The branches, by different canals, diſtribute the ſap, which the roots had ſent up to the body. In ſpring, theſe branches by their ſhade ſcreen us from the rays of the ſun. In winter, they nouriſh that warmth which preſerves in us the natural heat. Nor is their wood only uſeful for fuel: being of a ſoft ſubſtance, tho' ſolid and durable, mankind eaſily give it what forms they pleaſe, for the great works of architecture and navigation. The

fruit-

fruit-trees, by inclining their branches to the earth, ſeem to offer us their bounty. Both trees and plants, by ſhedding their fruits and ſeeds, ſecure the means of their own propagation. The weakeſt vegetable, the ſmalleſt herb, contains in miniature as it were a ſeed, which is the original of what we ſee in the talleſt plants, and the largeſt trees. The earth, without changing herſelf, produces all theſe changes in her own boſom.

SECT. XIII.

Of the water.

LET us next take a view of the element we call water: this is a liquid, clear, tranſparent body. On the one hand it runs, eſcapes the touch, and flies away. On the other, it aſſumes the ſhape of all the bodies which ſurround or incloſe it, having none of its own.

Were

Were water a little more rarified, it would be a kind of air; all the face of the earth would become dry and barren: it could only entertain creatures of the feathered kind. No other animal would be able to ſwim, nor fiſh to live in it. All commerce by navigation would be deſtroyed. What all-wiſe hand has, by ſubtilizing the air, found means to condenſe the water; yet at the ſame time ſo admirably diſtinguiſhed thoſe two kinds of fluid bodies? Were the water more rarified, it could not ſupport thoſe large floating edifices we call ſhips. The lighteſt bodies would immediately ſink. What thought has ſo nicely adjuſted the configuration of the parts, and aſſigned ſo exact a degree of motion, as to render water thus fluid, inſinuating, apt to fly off; and, in ſhort, incapable of all conſiſtence; yet, at the ſame time, ſtrong enough to bear, and impetuous enough to carry away, the heavieſt maſſes?

maſſes? This element is tractable. Man leads and diſtributes it, as he pleaſes. He raiſes it, by art, up the ſteepeſt hills; and makes uſe of its own gravity, to force it again to the ſame height from whence it falls. But he, who rules the waters with ſo abſolute a ſway, is often in his turn forced to yield to their power. Water is one of thoſe grand moving bodies, which man knows how to employ, to aſſiſt him in the moſt neceſſary arts; in which his ſtature and ſtrength are of no uſe to him. Yet, theſe waters, which, notwithſtanding their fluidity, form ſuch heavy maſſes, are often raiſed above our heads, and remain a long time ſuſpended there. Do you behold thoſe clouds, which fly, as it were, on the wings of the wind? If theſe ſhould deſcend ſuddenly in ſolid columns of water, rapid as torrents, they would drown and deſtroy every thing in the place of their fall, and the reſt of the country

country would remain burnt up. What power keeps theſe aereal reſervoirs balanced on high, and ſuffers them only to diſtil drop by drop, as if they were ſprinkled by a watering-pot? Whence comes it, that in certain hot countries, where it ſcarce ever rains, the nightly dews are ſo abundant, as to ſupply this defect? And that in other regions, ſuch as the banks of the Ganges and the Nile, the regular inundation of the rivers at certain ſeaſons of the year ſhould, preciſely in the nick of time, provide for the wants of the people, by watering their lands? Can we conceive meaſures more juſtly taken to fertilize the earth?

THUS, water not only quenches the thirſt of man, but alſo refreſhes dry and barren lands. The hand, to which we owe this precious gift, has carefully diſtributed it through the earth, like the canals of a garden. The waters

deſcend

deſcend from the high mountains, where their ſprings lie. They form large brooks in the valleys. The rivers wind through the ſpacious plains, the better to water them. They next precipitate themſelves into the ocean, to make it the centre of commerce to all nations. This ocean, which ſeems placed in the middle of the earth, as an eternal bar of ſeparation, on the contrary, affords a conveniency to all thoſe who cannot paſs by land from one country to another, without great fatigue, long delays, and imminent dangers. It was by this pathleſs road acroſs the deep, that the Old World became firſt acquainted with the New; from whence it has ſince drawn ſo many advantages, and ſuch immenſe treaſures. The waters, thus diſperſed with infinite art, circulate thro' the earth, juſt as the blood does in the human body. But, beſides this conſtant circulation of the waters, we have ſtill

to

to conſider the ebbing and flowing of the ſea. Let us wave a preſent inquiry into the cauſes of this myſterious effect. What is certain is, that the ſea advances and retires preciſely in the ſame places, and at the ſame hours. Who is the author of this regular motion? A degree more or leſs of this motion would put all nature out of joint. A degree more in the ſpring of the tide would overflow whole kingdoms. Who has laid down exact meaſures to ſuch vaſt and ungovernable bodies? Who has known to keep the preciſe medium between too much and too little? Who has aſſigned the ſea an immoveable boundary, which it was to preſerve in all future ages, by ſaying, "Here ſhall your proud waves be ſtayed?" Yet theſe waters, ſo ſoft and pliable in ſummer, become during winter as hard as ſtone. The ſummits of the higheſt mountains are at all times covered with ice and ſnow, which form

the

the ſources of rivers; and which by watering the paſtures, render them more fruitful. Here, the waters are ſweet, to quench the thirſt of man and beaſt: there, they yield a tincture of ſalt, which ſeaſons them, and ſerves to preſerve our food from corruption. In ſhort, if I raiſe my head, I perceive in the clouds above us whole ſeas ſuſpended, to ſtop the ſcorching rays of the ſun, and water the thirſty glebe. What power could collect and manage theſe watry ſtores, ſo as never to ſuffer them to deſcend, but in moderate and gentle ſhowers?

SECT. XIV.

Of the air.

AFTER theſe reflections on the waters, let us apply ourſelves to examine other maſſes more extenſive. Do you behold what we call the air? A body ſo pure, ſo ſubtle, and ſo tranſparent, that the rays of the ſtars, placed at an almoſt infinite diſtance from us, penetrate it intirely and inſtantaneouſly, to enlighten our eyes! A little leſs ſubtlety in this body would have robbed us of the day-light, or left us only a gloomy confuſed light, as when the air is covered with a thick miſt. In this vaſt body of air we live confined, as fiſhes in the depths of the water. Juſt as water ſubtilized would become a kind of air, in which fiſhes would die; ſo, on the other hand, if the air were more thick and humid,

humid, it would deprive us of reſpiration. We ſhould then be drowned in the waves of this condenſed air; juſt as any terreſtrial animal is in the ocean. Who has ſo exactly purified this æther, in which we breathe? Were it more condenſed, it would choak us: were it more rarified, it would want that ſweetneſs and temperature, which is the conſtant reliſh and ſupport of our lives. We ſhould every-where experience, what travellers have found on the tops of the higheſt mountains; where the ſubtlety of the air furniſhes no moiſture for the lungs. But what inviſible power is it which excites, and ſo ſuddenly appeaſes, the ſtorms which agitate this fluid body? Thoſe of the ſea are only the conſequences of this. From what ſtores are derived the winds, which purify the air; which cool us during the ſultry heats, temperate the ſevere inclemencies of winter, and, in an in-

ſtant, change the face of the ſkies? Borne by theſe winds, the clouds are wafted from one region to another. We know certain winds blow exactly at certain times, in certain ſeas; that they laſt a regulated time, and are as it were purpoſely ſucceeded by others, to render navigation more regular and commodious. Provided men were as patient and punctual as the winds, they would chearfully go through the moſt tedious and hazardous voyages.

SECT. XV.

Of fire.

BEHOLD you that fire, which appears kindled in the ſtars, and ſpreads its luſtre all around? Regard that flame, which certain mountains emit, and which the earth feeds with ſulphur in its bowels. This very fire remains peaceably

peaceably concealed in the veins of a flint; and, to diſcover itſelf, only waits the ſhock of ſome external body. From ſo ſlight a cauſe ſpring earthquakes, which overturn mountains and cities. Man knows how to light up this element, and apply it to his own uſes, to ſoften the hardeſt metals; or, with wood or coal, to produce in the coldeſt climates a light and warmth, which ſupplies the place of the ſun, when he withdraws his beams. This vital heat inſenſibly penetrates all ſeeds. It is like the ſoul of life, conſuming all that is impure, and renewing what it purifies. This fire ſtrengthens men too weak. It ſuddenly conſumes edifices and rocks: but would we aſſign it a more moderate uſe, it kindles up new life, it ſerves to dreſs our food. The antients admired this element ſo, that they fancied it a celeſtial treaſure, which man ſtole from the gods.

SECT. XVI.

Of the heavens.

IT is time to raiſe our eyes towards the heaven. What power has ſtretched out above our heads this vaſt and ſuperb canopy? What an aſtoniſhing variety of admirable objects! It is to preſent us this magnificent ſpectacle, that an omnipotent hand has placed before our eyes ſuch grand and ſtriking views. "It is "to make us admire the heaven (ſays "Cicero) that GOD has formed man dif-"ferent from other creatures. He "walks upright, and lifts his head, that "he may be converſant with things "above." Sometimes the heavens preſent a dark blue, in which the clear-eſt fires become more luminous. Sometimes a ſky preſents itſelf tempered with the ſofteſt colours that painting can deſcribe.

ſcribe. Sometimes clouds appear of all figures, and the brighteſt dyes, which vary every moment the decorations of the ſcene, by the ſweeteſt changes of light. The regular ſucceſſion of nights and days, what does it give us to underſtand? The ſun for ſo many ages never fails to ſerve mankind, who could not bear his abſence. The dawn, for ſo many thouſand years, has never once neglected to uſher in the day; it ariſes preciſely at the time and place appointed. "The ſun (ſays the ſcripture) knows "every day his appointed place of reſt." From hence, by turns, he enlightens the two hemiſpheres; and viſits all thoſe to whom he owes his light. The day is the time appointed for ſociety and labour: the night, involving the earth in its ſhade, ends the fatigues, and ſoftens the cares, of mankind. It ſuſpends all tumult, and produces a general calm. It diffuſes ſilence and

ſleep. By refreſhing the body, it revives the ſpirits. The morning ſoon returns, to recal man to his daily toil, and re-animate the face of nature.

SECT. XVII.

Of the ſun.

BUT, beſides this ſo conſtant courſe, which forms day and night; the ſun diſcovers another, by which during ſix months he approaches one pole, and at the end of that time returns with the ſame care to viſit the other. By this beautiful diſpoſition, one ſun ſerves the whole earth. If the ſun was larger, and placed at the ſame diſtance, he would ſcorch up the world to duſt. Were he leſs, the earth would be frozen, and uninhabitable. If, in his preſent ſtate, he were nearer us, we ſhould be ſet on fire; if remoter, we ſhould not be able to ſubſiſt on

on this terreſtrial globe, for want of heat. What other compaſſes, but thoſe whoſe ſweep takes in heaven and earth, could take ſuch juſt meaſures? This great luminary does no leſs good to thoſe parts from whence he withdraws, by giving them time to cool, than he does to thoſe he approaches, to chear with his beams. His benevolent aſpect fertilizes every thing he views. This change produces that of the ſeaſons, whoſe variety is ſo agreeable. The ſpring huſhes the ſtormy winds, diſcloſes the flowers, and promiſes the fruits. The ſummer yields her rich harveſts. Autumn diſtributes the fruits promiſed by ſpring. Winter, which forms a kind of night, (during which man unbends himſelf) hides the treaſures of the earth, only that the ſucceeding ſpring may diſplay them with all the graces of novelty. Nature, thus differently dreſſed, by turns makes ſo many beautiful appearances, that it

leaves

leaves mankind no time to grow weary of what they poſſeſs.

BUT, how comes the courſe of the ſun to be ſo regular? It appears, this luminary is only a globe of very ſubtle flame, and conſequently very fluid. Who is it confines this flame, ſo moveable and impetuous, in the preciſe bounds of a perfect globe? What hand conducts this flame in ſo exact a line, without deviating to one ſide or the other? This flame is ſupported by nothing. No other body could either guide, or keep it in ſubjection. It would ſoon conſume ſuch a body on its approach. Whither does it go? Who has taught it to wheel inceſſantly with ſuch regularity in ſpaces where nothing confines it? Does not it circulate round us, purpoſely for our uſe? But, ſuppoſe the contrary, that our earth turns round it; I ask, whence comes it ſo juſtly placed in the centre

centre of the univerſe, to be like the common fire, or rather the ſoul, of all nature? I ask, how a globe, of ſuch ſubtilized matter, never changes its place, in the immenſe ſpaces which ſurround it; and which, being compoſed of fluid bodies, could never reſiſt the impetuoſity of its flame?

LASTLY, I demand, whence this terreſtrial globe, which is ſo hard and ſolid, moves ſo regularly round this grand luminary, through ſpaces, where no other ſolid body confines it, ſo as to regulate its courſe? Let us ſearch in natural philoſophy, as much as we will, the moſt ingenious reaſons to explain this phænomenon. All theſe (allowing them true) would be ſo many proofs of the exiſtence of a Deity. The more juſt, ſimple, conſtant, ſure, and productive of good effects, this grand ſpring is, which conducts the machine of the univerſe;

the

the more evident it is the work of an omnipotent, all-wiſe hand, who has ſuited it to ſuch noble and important purpoſes.

Sect. XVIII.

Of the ſtars.

LET us once more turn our view to theſe immenſe ſpaces, where the ſtars ſparkle above our heads. If theſe celeſtial roofs be ſolid, who was the architect? Who has fixed ſo many grand luminous bodies in certain places of this arch, at certain diſtances? Who has turned this vaſt canopy ſo regularly round us? If, on the contrary, the heavens are only immenſe ſpaces, filled with fluid bodies, like the air which ſurrounds us; how comes it, that ſuch ſolid bodies ſhould float in it, without ever ſinking or claſhing with each other? For ſo many

many ages, that aſtronomical obſervations have been made, we have never been able to diſcover the leaſt diſorder in the heavens. Could a fluid body impart an arrangement ſo conſtant and regular to bodies ſwimming circularly in its boſom? What ſhall we think of this almoſt innumerable company of ſtars? The profuſion with which the hand of God has ſcattered them over the ſkies, ſhews that they coſt nothing to his power. He has ſtrewed the heavens with them, juſt as a magnificent prince, who diſperſes his gold liberally, or adorns his robe with jewels. Let any one aſſert, as he pleaſes, that theſe ſtars are ſo many worlds like our earth; I will grant it for a moment. How wiſe and powerful then muſt that power be, who forms worlds numberleſs as the grains of ſand which cover the ſea-ſhore? And who, for ſo many ages, directs without trouble thoſe moving worlds, as a

ſhepherd

ſhepherd conducts his flock? If, on the contrary, theſe luminaries are only flames lighted up to irradiate this little ſpot we call the earth, they diſcover a power unwearied and boundleſs. What profuſe bounty is it in the Deity, to entertain man, in a corner of the univerſe, with ſo aſtoniſhing a ſpectacle*?

But, amongſt theſe ſtars, I perceive the moon, which ſeems to partake, with the ſun, the care of enlightening us. She ſhews herſelf ſeaſonably, with her radiant train, when the ſun is obliged to withdraw, and reſtore day to the other hemiſphere. Thus, even the night, notwithſtanding its darkneſs, has a light, gloomy indeed, but mild and uſeful. This light is derived from the ſun, tho' abſent. Thus is the univerſe conducted

* Suſtinendi muneris propter imbecillitatem difficultas minimè cadit Majeſtatem Deorum. Cicero, de Nat. Deor. lib. ii.

conducted with ſuch admirable art, that a globe adjoining to the earth, and in itſelf as opaque, ſerves nevertheleſs to convey to us by reflexion the rays it receives from the ſun; and that this ſun, by means of the moon, enlightens ſuch nations as lament his abſence, while he is performing his due office to others.

THE motion of the ſtars, you will ſay, is regulated by unchangeable laws. Allow it to be ſo. But this very fact proves what I want to eſtabliſh. Who has aſſigned to all nature laws, all at once ſo conſtant and ſalutary? Laws, ſo ſimple, that one is tempted to believe they act ſpontaneouſly; and ſo beneficial, that we cannot forbear acknowledging they diſcover a ſupriſing art. Who conducts this univerſal machine, which inceſſantly revolves for us, without our thinking of it? To whom ſhall we aſcribe the

the aſſemblage of ſo many ſprings, ſo concealed, yet ſo nicely adjuſted? To whom attribute the harmony of ſo many bodies great and ſmall, viſible and inviſible, which all equally conſpire to ſerve us? The diſplacing the ſmalleſt atom in this machine would disjoint all nature. The wheels of a watch are not joined with more ſkill or propriety. What then is this plan ſo extenſive, ſo well ſupported, ſo beautiful, and ſo beneficial? The neceſſity of theſe laws is ſo far from hindering me to ſeek out the author, that it only ſerves to augment and heighten my curioſity and admiration. Nothing leſs than a hand, equally knowing and powerful, could place his work in ſo ſimple, fruitful, conſtant, and uſeful an order. I am not afraid therefore to ſay, with the ſcripture, "That every "ſtar haſtens where the LORD ſends it; "and that when he ſpeaks, they anſwer "with trembling, lo! we are here."

SECT.

SECT. XIX.

Of animals.

NEXT let us direct our regard towards the animals; yet more worthy of our admiration, than the heavens, or the ſtars. Of theſe are innumerable kinds. Some are furniſhed with but two feet; others, with four; others, with a great many: ſome walk, others creep, others fly; ſome fly, march, and ſwim altogether. The wings of birds, and the fins of fiſhes, reſemble oars, cut the fluid body of the air or water, and conduct the buoyant body of the bird, or fiſh, whoſe ſtructure is like that of a ſhip. But the wings of birds have feathers with a down, which ſwells in the air, yet would be heavy in the water. On the contrary, the fins of fiſhes have their points hard and dry,

to cleave the water without being ſoaked by it. Certain water-fowl, as ſwans, carry their wings, and the reſt of their plumage, very high, for fear of wetting it, and that it may ſerve them for ſails. They have the art to turn this plumage agreeably to the wind; and ſo ſail, as ſhips do, upon a ſide-wind. Other water-fowl, as ducks, have their feet covered with a thick ſkin, which, like raquets, prevents their ſinking, and being entangled, in the marſhy banks of lakes, ponds, or rivers.

AMONGST the land-animals, the wild beaſts, as the lions, &c. are furniſhed with ſtrong large muſcles on their ſhoulders, thighs, and legs. By this means they are ſupple, active, ſtrong, and ready to ſpring forward. The bones of their jaws are prodigious, in regard to thoſe of the reſt of their body. They have teeth and claws which are terrible weapons

weapons to tear and devour weaker animals. For the ſame reaſon, birds of prey, as eagles, have a beak and claws, which pierce every thing. The muſcles of their wings are of a large ſize, and compoſed of very hard fleſh. Hence their flight is more quick and rapid. Thus theſe birds, tho' otherwiſe heavy, eaſily raiſe themſelves to the clouds; from whence they deſcend like lightening, on what prey they can diſcover. Other animals have horns. The greateſt ſtrength of ſome lies in their reins and neck. Others can only kick. Every kind has its arms defenſive and offenſive. Their purſuits are a kind of hoſtility; which they carry on one againſt the other, for the ſupport of life. They have alſo their laws and policy. One, like the tortoiſe, carries on his back the houſe in which he was born. On the other hand, others, like the bird, build theirs on the talleſt branches of the

trees, to ſecure their young from the inſults of ſuch animals as are not winged. They even depoſit their neſts amidſt the thickeſt branches, to hide them from their enemies. The caſtor, or beaver, again builds his aſylum at the bottom of the waters of a lake or river; and has the art of raiſing dikes to defend it from all inundations. The mole is armed with a noſe ſo pointed and ſharp, that in a moment he penetrates the hardeſt ſoil, to form himſelf a ſubterraneous retreat. The fox digs a burrow with two entries, that he may not be ſurpriſed, and to elude the ſnares of the hunter. Reptiles are of a quite different ſtructure. They fold, and unfold themſelves, by the revolution of their muſcles: they climb, they cling, they ſqueeze, they faſten on the objects they meet, and ſubtilely inſinuate themſelves every-where: their organs ſeem almoſt independent of each other; thus

they

they live after being cut aſunder. "Thoſe birds (ſays Cicero) which have "long feet, have alſo their neck long "in proportion, to bend their bills to "the ground, and take their ſuſte-"nance." The camel is the ſame. The elephant, on the other hand, whoſe neck would be too heavy for his bulk, were it as long as that of the camel, is provided with a trunk, which is an aſſemblage of nerves and muſcles: this he can lengthen, draw in, and wind into all ſhapes, to ſeize bodies, to carry them off, or repel them; on which account the Romans gave this member the name of a hand.

CERTAIN animals ſeem made purpoſely for man. The dog is deſigned to attend him, to be diſciplined as he pleaſes; and to give him an agreeable image of ſociety, friendſhip, fidelity, and tenderneſs: he guards what is in-

truſted to his care; by hunting, he takes ſeveral animals, which he leaves to his maſter, contenting himſelf with what ſhare is allotted him. The horſe, and other animals, ſubmit themſelves to the yoke of mankind, to aſſiſt them in their labour, and to carry a thouſand burdens. They are deſigned to eaſe his weakneſs, and obey all his motions. The oxen are endued with ſtrength and patience, to draw the plough, and cultivate the earth. The ſheep carry in their fleece, which is not their own, and which renews itſelf, a benefit, which invites man to ſheer them annually. Even the goats are provided with a long hair, uſeleſs to them; of which men make ſtuffs to cloathe themſelves. The ſkins of beaſts furniſh us with the fineſt furs, and that in countries the moſt remote from the ſun. Thus the great Author of nature has not only cloathed thoſe animals ſuitably to their neceſſities, but

their

their ſpoils ſerve for habits, to keep warm the inhabitants of thoſe frozen regions. Such animals as are unprovided with hair, have uſually a very thick hard ſkin, like ſcales. Others are furniſhed actually with ſcales, which cover each other like the tiles of a houſe; and which open or ſhut, juſt as it ſuits the creature to dilate or contract itſelf. Theſe ſkins, and theſe ſcales, ſerve the neceſſities of men. Thus, in nature, not only the plants, but the animals, are made for our uſe. Even wild beaſts may be tamed, or at leaſt they ſtand in awe of mankind. If all parts of the world were peopled and civilized, as they ought to be, there would be no animals which durſt attack man. Wild beaſts would be forced to retire to the receſſes of the foreſts, where they would remain to exerciſe the boldneſs, ſtrength, and addreſs of mankind, by a diverſion reſembling war, without

giving occaſion to one of a more ſerious kind. But, here it is highly proper to remark, that the animals moſt noxious to mankind, are leaſt fruitful; thoſe, on the contrary, of the beneficial ſort, moſt apt to multiply and increaſe. We kill, beyond all compariſon, more black cattle and ſheep, than we do bears or wolves; yet nevertheleſs, there are infinitely fewer of the latter, than of the former, on the earth. CICERO obſerves, "That the "females of each kind have teats, "proportioned to the number of young "they uſually bring forth. The larger "the burden, the greater plenty of "milk has nature afforded them to "ſuckle it."

WHILE the ſheep nouriſh their fleeces for us, the ſilkworm weaves, by way of emulation, rich ſtuffs; and ſpends his very exiſtence to oblige us. Of his cod, he forms a tomb of his own workmanſhip;

ſhip; in which he ſhuts himſelf up, to revive again under a ſtrange, but beautiful form, and ſo perpetuate his own exiſtence. On the other hand, the bees collect with care the juices of the moſt odoriferous flowers, to compoſe their honey; which they diſpoſe with a ſkill and order, that may ſerve for a leſſon to mankind. Many inſects transform themſelves into flies; others into worms. If ſome appear deformed or uſeleſs, we ought to reflect, that what makes a part of this great ſpectacle of nature, and contributes to its variety, is not without its uſe to ſerious and attentive minds. What is more beautiful and magnificent than ſuch a number of animal republics, ſo exactly civilized; and yet of whom every kind is of a different ſtructure from the other? All diſcovers how much the ſkill of the Almighty Workman ſurpaſſes the baſe matter he has thus modelled. I am filled with aſtoniſh-

ment

ment at every object, down to the ſmalleſt gnat. If this ſpecies be ſometimes troubleſome, we ſhould remember man has need of ſome little vexations, to give him a reliſh for nobler bleſſings. He would turn effeminate, and forget himſelf, if he had nothing to moderate his joys, or to exerciſe his patience.

SECT. XX.

Of the wonderful arrangement of all the bodies which compoſe the univerſe.

LET us now examine the wonders, which equally ſhine forth in the greateſt bodies, and the ſmalleſt. On the one hand, I behold the ſun, ſo many thouſand times larger than our earth; I view him circulate through ſpaces, in compariſon of which he himſelf is but a ſhining atom. I ſee other ſtars, perhaps bigger

bigger than he, which revolve in ſpaces yet more remote from us. Beyond theſe, which ſurpaſs all bounds, I confuſedly 'ſpy other ſtars; which I can neither reckon, nor diſtinguiſh. The earth, on which I ſtand, is but a point, in proportion to this vaſt ſyſtem, where we can find no limit. All this is ſo nicely adjuſted and diſpoſed, that you cannot diſplace a ſingle atom, without diſconcerting this grand machine; which moves with ſo regular an order, that even the motion contributes to perpetuate its variety and perfection. It muſt be ſome omnipotent power, which conducts this work for ſo many ages; and "whoſe fingers (as the ſcripture "expreſſes it) play upon the univerſe.

SECT.

SECT. XXI.

Of the wonders of bodies infinitely ſmall.

ON the other hand, the works of nature are no leſs wonderful in ſmall, than in great bodies. I find equally in the former a kind of infinite, which aſtoniſhes me, and confounds me. To find in a ring-worm, as in an elephant, or a whale, members perfectly organized; to diſcover a head, a body, legs and feet, formed like thoſe of the largeſt animals. In each part of theſe living atoms are muſcles, nerves, veins, arteries, and blood. This blood is furniſhed with ſpirits, ramified parts, and humours. Theſe humours again are made up of various particles; ſo that thought loſes itſelf in tracing the progreſſion of a compoſition ſo infinitely minute.

THE

THE microſcope diſplays to us in each object, as it were, a thouſand others, which eſcaped our knowledge. Yet, in every object diſcovered by this inſtrument, others ſtill remain unſeen, which the microſcope itſelf can never produce. What wonders ſhould we ſee, if we could continually improve thoſe glaſſes, which are invented for the Aſſiſtance of our feeble and rude ſight! But, let us ſupply by our imagination the defect of our eyes, and make it ſerve us as a microſcope, to repreſent in each atom a thouſand new and inviſible worlds. It cannot, however, inceſſantly figure to us new diſcoveries in bodies ſo infinitely ſmall. The taſk would be too painful. It is neceſſary it ſhould ſtop its inquiries, and leave, in the minuteſt organ, a thouſand wonders ſtill undiſcovered.

SECT.

SECT. XXII.

Of the ſtructure of the animal.

LET us conſider now the animal machine, in which there are three things cannot be ſufficiently admired. 1. It is furniſhed with the means of defending itſelf againſt thoſe which would attempt its deſtruction. 2. It has the power of renewing itſelf by food. 3. It can propagate its ſpecies by generation. Let us examine each of theſe three articles.

SECT. XXIII.

Of the inſtinct of the animal.

ANIMALS have what we call an inſtinct, by which they are taught to ſeek ſuch objects as are uſeful to them, and

and to ſhun thoſe that are prejudicial. We ſhall not at preſent inquire, wherein this inſtinct conſiſts. Let us content ourſelves with the ſimple fact.

The little lamb ſmells his dam afar off, and runs to meet her. The ſheep is ſeized with horror at the approach of the wolf; and flies, before he can well diſcern his enemy. The hound never fails to diſcover, by his ſcent alone, the way the ſtag has taken. There is in each animal an impetuous ſpring, which aſſembles at once all the ſpirits, braces the nerves, renders the limbs more pliant, and increaſes, in a ſurpriſing manner, in ſudden dangers, the ſtrength, agility, ſwiftneſs, or cunning of the animal, in order to avoid the object which menaces his ruin. It is nothing to the preſent queſtion, whether beaſts have knowledge? Nor do I pretend to enter into any philoſophical diſquiſition.

If

If a man, dancing on the ropes, were to reaſon on the laws of an equilibrium, his reflections would make him loſe his balance; which he keeps exactly, without reaſoning; and his reaſon would only ſerve to bring him to the ground. The caſe is the ſame with beaſts. Say, as much as you pleaſe, that they reaſon like men; your aſſertion no-way invalidates my proof; ſuch reaſoning can never ſuffice to explain the motions we admire moſt in animals. Shall we ſay, that they underſtand the deepeſt rules of mechanics, which at the ſame time they obſerve with ſuch perfect exactneſs, when they run, leap, ſwim, conceal themſelves, wind again to hide their track from the dogs, or make uſe of the ſtrongeſt part of their body to defend themſelves? Shall we affirm, they naturally know the mathematics, which man is ignorant of? Shall we dare to ſay, that they perform with deliberation

and

and art, all thoſe movements ſo rapid and juſt, which men do without ſtudy or thought? Shall we aſſign them reaſon in thoſe very actions, in which it is certain man wants it? It is inſtinct (ſay they) conducts the beaſts. Be it ſo! It is, in effect, an inſtinct; but this inſtinct ſhews a wiſdom, and an admirable ſagacity, not in the animals which neither reaſon, nor on theſe occaſions can have the leiſure to reaſon, but in that ſuperior wiſdom which directs them. This inſtinct, or thought, which reflects and wills for the animal, in ſudden emergencies, wherein it can neither think nor will, tho' it were as rational as ourſelves, muſt be owing to the prudence of the workman, who made the machine. Let us then talk no more of inſtinct or nature. Theſe are only various names in the mouths of thoſe who uſe them. There is, in what they call nature and inſtinct, a ſuperior addreſs and ingenuity, of

which our human invention is but the ſhadow. What is beyond diſpute is, that there are in animals a prodigious number of motions intirely indeliberate, which are performed according to the niceſt rules of mechanics. The machine only obeys theſe rules. This is the matter of fact, independent of all philoſophy; and the matter of fact muſt decide it. What ſhould we think of a watch, which ſhould ſeaſonably fly, defend itſelf, or eſcape to preſerve itſelf from the hand which would break it? Should we not admire the ſkill of the artiſt? Could we ever conceive the ſprings of this watch were formed, proportioned, arranged, and put together by pure chance? Would it be a ſufficient explication of theſe nice operations, to talk of the inſtinct and nature of this watch, which preciſely pointed out the hours to its maſter, and eſcaped from all thoſe who endeavoured to ſpoil its movement?

SECT.

SECT. XXIV.

Of food.

WHAT can be more beautiful or excellent, than a machine which inceſſantly repairs and renews itſelf? Animals, limited in their ſtrength, are ſoon exhauſted by labour; but the more they toil, the more they are preſſed to make themſelves amends by a plentiful nouriſhment. Thus daily aliment reſtores the vigour they have loſt. The animal receives within his body a foreign ſubſtance, which, by a ſurpriſing kind of metamorphoſis, becomes his own. This at firſt is ground ſmall, and changes into a liquor. It is next purified, as if it were paſſed through a ſieve, to ſeparate from it whatever is too groſs. At length it is conveyed to the centre, or heart, where it is ſubtilized, and becomes blood.

Laſtly, it flows, and by innumerable branches inſinuates itſelf to bathe all the members. It filtrates thro' the muſcles, and becomes fleſh itſelf. So many aliments and liquors, of ſuch different taſtes and colours, are now but one fleſh. That food, which was an inanimate ſubſtance, by maintaining the life of the animal, becomes the animal itſelf. The parts which compoſe the creature, are exhaled and carried off by an inſenſible and internal tranſpiration. What four years ago was ſuch a horſe, is now no more than air or dung: what was then hay or oats, is become that very horſe ſo ſprightly and vigorous. At leaſt, he paſſes for the ſame horſe, notwithſtanding this inſenſible change of his ſubſtance.

Sect. XXV.

Of ſleep.

TO food, let us join ſleep; by which the animal ſtops not only all external motion, but likewiſe all ſuch internal operations, as are apt too much to agitate and waſte the ſpirits. He only retains digeſtion and reſpiration, that is to ſay, that all motion prejudicial to his ſtrength is ſuſpended; and the motion proper to renew it, is ſolely and freely exerciſed. This repoſe, which returns like an inchantment every night, ſeizes us, while the darkneſs prevents all work. Who has contrived this ſuſpenſion? Who has ſo juſtly choſen the operations proper to continue it? Or, who has with ſuch nice diſcernment excluded thoſe which might interrupt it? The next morning all paſt fatigues appear, as

it were, vaniſhed and forgot. The animal labours, as if he had never been buſy; and this refreſhment of ſleep gives him a new vivacity to undergo freſh toil. The nerves are full of ſpirits, the muſcles are flexible, and the ſkin remains firm; tho' one would think it ſhould be worn. The living body of an animal ſoon conſumes inanimate bodies, even the moſt ſolid of thoſe around it, without being waſted itſelf. A horſe wears out ſeveral ſaddles. The fleſh of an infant, tho' ſo delicate and tender, wears out many cloaths; while it daily gathers ſtrength. Were this renovation perfect, it would be immortality, and the gift of eternal youth. But, as it is otherwiſe, the animal inſenſibly loſes his ſtrength, and grows old; becauſe all that is created muſt carry the marks of that nothing from whence it ſprung, and conſequently have a period.

SECT. XXVI.

Of generation.

WHAT can be more ſurpriſing than the multiplication of animals? Regard the individuals, no creature is immortal. Every thing grows old, paſſes away, diſappears, and is no more: regard the ſpecies, all ſubſiſts, is permanent and immutable, though in a continual viciſſitude. Since there lived in the world men careful to preſerve the memory of events, we have ſeen neither lions, tygers, bears, or wild boars, produced by chance in the caves or foreſts. Nor do we behold any fortuitous productions of dogs or cats. Neither oxen, nor ſheep, are ſpontaneouſly produced in the ſtalls or paſturages. Each of theſe animals owes its birth to a certain male, and a certain female, of its own kind.

ALL theſe different ſpecies preſerve themſelves much in the ſame ſtate, for ſo many ages. We don't for three thouſand years, find any one kind is loſt; nor, on the other hand, do we ſee any ſort multiplied to an exceſs incommodious to others. If the lions, bears, and tygers, ſhould increaſe to a certain degree, they would deſtroy all the deer, goat, ſheep, and oxen; they would even grow too ſtrong for human-kind, and depopulate the earth. Who has taken ſuch juſt meaſures, that neither each ſpecies ſhould be extinguiſhed, nor yet ſuffered to multiply too much?

BUT, in truth, this continual propagation of each ſpecies is a wonder, to which we are too much accuſtomed. What ſhould we think of a watch-maker, who poſſeſſed the art of making watches, which of themſelves ſhould produce new watches without end? So that the two

firſt

firſt watches ſhould be ſufficient to multiply and perpetuate the kind over all the earth? What ſhould we ſay of an architect, if he knew how to make houſes, that ſhould of themſelves make other houſes, to renew a habitation for men, before they were ready to fall into decay? This is what we ſee amongſt animals. They are not, if you pleaſe, mere machines, like watches: but in fact, the author of theſe machines has placed within them ſomething to reproduce their ſpecies for ever, by the aſſemblage of the two ſexes. Say, as much as you think proper, that this generation of animals is effected by moulds, or by an expreſs configuration of each individual; which ever of the two ſides you take, you will gain nothing; and the art of the workman will equally appear. If you ſuppoſe, that, at each generation, the individual, without any mould, has an expreſs configuration of the parts;

parts; I aſk, who is it directs the configuration of ſo compoſed a machine, which diſcovers ſuch infinite addreſs? If, on the contrary, to exclude all art, you ſuppoſe the whole effected by moulds; I demand, who prepared theſe moulds? They are indeed more wonderful than the machines they would hatch from them.

LET us then ſuppoſe theſe moulds in animals, which lived four thouſand years ago; and let them (if they will) affirm, that they were ſo incloſed in each other without end, that theſe were not only ſufficient to furniſh the generations of the four thouſand years, but enough remaining ready for the formation of all the animals neceſſary to preſerve the ſpecies to the end of all ages. Theſe moulds, which by their configuration contain the exact ſhape of the animal (as I have already obſerved) are as difficult to be

be explained, as the animals themſelves. But the doctrine of moulds is attended with yet more inexplicable wonders. At leaſt the configuration of each animal in particular requires only as much power and art, as is neceſſary to ſet a going all the ſprings which compoſe this machine. But, by ſuppoſing moulds, we muſt, 1ſt, affirm, that each mould contains in miniature, by an inconceivable delicacy, all the ſprings of the ſame machine. Now, there is greater art to form ſo compound a work, in ſo minute a compaſs, than to make one larger. 2dly, We muſt ſay, that each mould, which is an individual ready prepared for a firſt generation, diſtinctly contains in itſelf other moulds incloſed within each other without end, for all poſſible generations which may happen in the courſe of all ſucceeding ages. What can be more ſurpriſing, or wiſe in point of art, than this ordinance of an infinite number of individuals,

individuals, all beforehand ſhut up in one, from whence they are to iſſue? The moulds, then, are of no uſe to explain the ſucceſſive generation of animals, without a neceſſity of acknowledging ſome ſuperior ſkill. On the contrary, they ſhew a greater addreſs, and a more aſtoniſhing compoſition.

WHAT is manifeſt and inconteſtable, independently of all ſyſtems of philoſophy, is, that the fortuitous concourſe of atoms never yet produced, without generation, in any part of the earth, either lions, tygers, bears, elephants, ſtags, ſheep, oxen, cats, dogs, or horſes. Theſe are only produced from a copulation between their own kind. The two animals, which produce a third, are not the real authors of the art which diſplays itſelf in the creature ingendered by them. Far from having the ſkill to effect it, they are quite ignorant how

the

the work is compoſed, which proceeds from their generation. They don't know one ſingle ſpring of it. They are, in this caſe, only blind involuntary inſtruments, applied to the execution of a wonderful art, which is abſolutely ſtrange and unknown to them. Whence do they derive ſuch a ſurpriſing ſkill, which is certainly not their own? What power, what wiſdom, know how to employ, for works of ſo ingenious a ſtructure, inſtruments ſo incapable of knowing what they do, or of having the leaſt foreſight of it? It is needleſs to imagine, that beaſts have knowledge. But grant them as much as you pleaſe in other things, at leaſt you muſt own, that in generation they have no part in the ſkill which diſplays itſelf in the animals they produce.

LET us even go farther, and allow all that is related moſt wonderful of the

ſkill

ſkill of animals. Let us admire, as much as you pleaſe, the certainty with which a dog takes a third way, when he finds by his ſcent that the beaſt he is in purſuit of has left no marks in the two firſt. Let us wonder at the hind, which (as they ſay) leaves her little fawn in ſome concealed place, that the dogs may not diſcover it by the ſmell of her track. Let us view even the ſpider, who by her web lays ſubtle ſnares for the flies, to fetter and ſurpriſe them, before they can diſengage themſelves. Let us remark the artifice of the heron, who hides her bill beneath her wing, in order the ſurer to ſtrike whatever bird of prey ſhall attack it. Let us grant all theſe ſurpriſing facts. All nature is full of prodigies. But what are we to conclude from thence? If we ſeriouſly reflect, we ſhall find they prove too much. Shall we aſſert, that the beaſts have more reaſon than us? Their inſtinct has, no doubt,

doubt, more certainty than our conjectures: they never ſtudied logic, or geometry: they have no method, no ſcience, no cultivation. What they do, they do without conſideration or forethought. They do it at once, without deliberating about the matter. Men, after reaſoning together, daily find themſelves miſtaken: as for the beaſts, without reaſoning they daily execute what demands the exacteſt choice and proportion. Their inſtinct is in many caſes infallible. But this inſtinct is only a fine name, without meaning. For, what can we underſtand by an inſtinct more juſt, more preciſe, and more certain, than reaſon itſelf; unleſs a more perfect reaſon? We muſt therefore diſcover this wonderful reaſon, either in the work, or the workman; either in the machine, or the compoſer. For example, when I ſee in a watch an exactneſs in pointing out the hours, which ſurpaſſes my

my knowledge; I conclude, that if the watch does not reaſon, it muſt have been made by an artiſt, who knew how to reaſon this way better than I. The caſe is juſt the ſame, when I ſee beaſts, which every hour do things, in which appears a ſkill ſuperior to mine; I immediately conclude, that this ſurpriſing art muſt neceſſarily lie either in the machine, or the hand who made it. Does it reſide in the animal itſelf? What appearance is there, that a creature ſhould be wiſe and infallible, in certain points? If it is not in him, it muſt be in the great workman; as all the art of a watch lies in the head of the watch-maker.

SECT. XXVII.

Some faults which the beaſts commit, do not prevent their inſtinct being infallible in many things.

IT is to no purpoſe to object, that the inſtinct of beaſts is defective in certain points. It is no way ſurpriſing, that beaſts ſhould not be infallible in every thing; but it is truly ſo, that they ſhould have this quality in ſome caſes. Were they infallible in all things, their reaſon would be infinitely perfect; they would be ſo many divinities. In the works of an infinite power, there can be only a finite degree of perfection; otherwiſe, GOD would make creatures like himſelf, which were an impoſſibility. He therefore can only impart a limited degree of perfection, and conſequently of reaſon, to his works. This limitation is then

no proof, that the work is void of order and reaſon. Becauſe I am ſometimes deceived, it does not follow, that I am not always rational, and that every thing paſſes within me by mere chance. All that can be inferred, is, that my reaſon is bounded and imperfect. Juſt in the ſame manner, becauſe a beaſt is not infallible in every caſe by its inſtinct, tho' it be ſo in many, we are not to conclude the machine is irrational. It only follows, that its reaſon is limited. But, in ſhort, the fact is undeniable; to wit, that the operations of this machine diſcover a regular conduct, a ſurpriſing art, and a wiſdom, which in ſome caſes, and within certain bounds, approaches infallibility. To whom ſhall we aſcribe all this? To the work, or its author?

SECT. XXVIII.

The impoſſibility of beaſts having a ſoul.

IF you ſay, that beaſts have ſouls different from their bodies; I would aſk you, of what nature are theſe ſouls intirely different from their bodies, tho' attached to them? Who is it has had the art of uniting ſuch different natures? Who is it claims ſo abſolute an empire over thoſe different natures, as to form, in ſo regular a ſociety, one ſo conſtant, and where the correſpondence is ſo immediate?

IF, on the contrary, you ſay, that the ſame matter thinks, and at other times is incapable of thought, according to the different configuration and arrangement of the parts which can be given it; I will not affirm here, that matter cannot think;

and that it is impoſſible to conceive, that the parts of a ſtone can ever, without ſome additional help, know themſelves, whatever degree of motion or form you give them. At preſent, I content myſelf to ask you, in what conſiſts this preciſe arrangement and configuration of the parts, which you alledge? According to your ſcheme, there muſt be a degree of motion, wherein matter does not yet reaſon; and then another degree of the ſame kind, in which at once it begins to reaſon, and know itſelf. Who is he who has known how to chuſe this exact degree of motion? Who has diſcovered the line in which the parts ſhould move? Who has taken the neceſſary meaſures to find preciſely the ſize and figure each part ought to have, to preſerve the proportions between themſelves in the whole? Who has regulated the external figure, by which theſe bodies are to be limited? In ſhort, who has

diſcovered

diſcovered all the combinations in which matter is capable of thought; and of which, if you retrench the ſmalleſt, it muſt ceaſe to think? If you ſay, all this is owing to chance; I anſwer, you make this chance then ſo wiſe, as to be the ſource of reaſon itſelf. Unaccountable prejudice! not to acknowledge a moſt intelligent cauſe, the ſpring of all our knowledge; but rather chuſe to ſay, that the pureſt reaſon is an effect of the moſt blind of all cauſes, in a ſubject, ſuch as matter, of itſelf incapable of all reflection. In reality, there is nothing it is not better to admit, than to aſſert things ſo groundleſs and unwarrantable.

SECT. XXIX.

The ſentiments of ſome antient philoſophers, with regard to the ſoul and knowledge of beaſts.

THE philoſophy of the antients tho' very imperfect, was however aware of this inconvenience. It therefore maintained there was a divine ſpirit diffuſed through the univerſe; a kind of ſupreme wiſdom, which acted inceſſantly thro' all nature, and eſpecially in animals, as ſouls act upon the body. They thought this continual impreſſion of the divine ſpirit, which the vulgar term inſtinct, (without underſtanding the true ſenſe of the term) was the life or ſoul of every thing that lives. They added, that theſe ſparks of the divine ſpirit were the principle of all generation; that animals received them in their conception, and at

at their birth; and that, at the moment of their death, theſe divine particles detached themſelves from all terreſtrial matter, to fly away to the heavens, where they inrolled themſelves in the number of the ſtars. It is this philoſophy, at once ſo magnificent and fabulous, that Virgil ſo gracefully expreſſes, in theſe verſes on the bees; where he ſays, "That all the wonders we admire in "them have made ſeveral aſſert, that "they were animated by a divine breath, "and by a portion of the deity. This "aroſe from the perſuaſion men then "had, that God filled the earth, the ſea, "and the heavens; that from him beaſts "and men received life at coming into "the world; and that to him all things "go back and return, when they come "to a diſſolution; becauſe the ſouls, "(which are the principle of life) far "from being annihilated by death, "aſcend to eſtabliſh their reſidence in

" heaven, and increaſe the number of " the ſtars*."

Induc'd by ſuch examples, ſome have taught,
That bees have portions of ethereal thought,
Endu'd with particles of heav'nly fires:
For God the whole created maſs inſpires:
Thro' heav'n and earth, and ocean's depth, he throws
His influence round; and kindles as he goes.
Hence flocks, and herds, and men, and beaſts, and fowls,
With breath are quicken'd, and attract their ſouls:

Hence

* Eſſe apibus partem divinæ mentis, et hauſtus
Æthereos dixere; Deum namque ire per omnes
Terraſque, tractuſque maris, cœlumque profundum.
Hinc pecudes, armenta, viros, genus omne ferarum,
Quemque ſibi tenues naſcentem arceſſere vitas.
Scilicet huc reddi deinde, ac revoluta referri
Omnia, nec morti eſſe locum, ſed viva volare
Sideris in numerum, atque alto ſuccedere cœlo.
VIRGIL, Georg. lib. iv.

Hence take the forms his preſcience did
ordain,
And into him at length reſolve again.
No room is left for death: they mount
the ſky,
And to their own congenial planets fly.
DRYDEN.

THIS divine wiſdom, which moves all the known parts of the univerſe, ſo ſtruck the Stoics, and Plato before them, that they believed the whole world was an animal; but an animal rational, philoſophical, wiſe; in ſhort, the Supreme GOD. This philoſophy reduced the multiplicity of deities to one alone; and this ſole being they called natural; aſcribing to it eternity, infallibility, intelligence, omnipotence, and divinity. Thus the philoſophers, by endeavouring to follow a different ſyſtem from the poets, relapſed into all the poetical fables. They aſſigned, like theſe imaginary writers,

writers, an art, and a deſign, to all the parts of the univerſe, even thoſe which appeared the moſt inanimate. Without doubt, they were ſenſible of the art there is in nature; and were only miſtaken, in aſcribing to the work itſelf the wiſdom of the author.

SECT. XXX.

Of man.

LET us ſtop no longer at animals inferior to man. It is time to examine the bottom of man himſelf, in order to diſcover in him that POWER, whoſe image he is ſaid to be. I do not know in all nature, but two ſorts of beings; thoſe which have knowledge and reflection, and thoſe which are deſtitute of theſe. Theſe two ways of exiſtence are united in man. He has a body like thoſe corporeal beings which are moſt inanimated;

inanimated; and he has a ſoul, that is to ſay, a thinking part, by which he knows himſelf, and perceives the objects round him. If it be true, that there is a firſt being, who created all others out of nothing, man is truly his image: for, like him, he unites in his nature all the real perfection there is in theſe two different manners of exiſtence. But an image is but an image, and can only be a ſhadow of the true perfect being.

LET us begin the ſurvey of man, by the conſideration of his body. "I do "not know" (ſays a mother to her children in holy writ *) "how you "were formed in my womb." In effect, it is no wiſdom of the parents, which produces ſo compoſed and regular a work. They have no ſhare in this miracle. Let us then leave them, to carry our views higher.

SECT.

* 2 Maccabees vii. 22.

SECT. XXXI.

Of the ſtructure of the human body.

OUR body is kneaded of clay ; but let us admire the hand which has faſhioned it. The ſeal of the divine workman is imprinted on his work. He ſeems to have produced a maſter-piece from ſuch baſe materials. Let us caſt our eyes on this body, where the bones ſupport the fleſh which covers them. The nerves, which are braced thro' the body, give it all its ſtrength ; and the muſcles, thro' which they are interwoven, by dilating or contracting themſelves, form the moſt juſt and regular movements. The bones are ſeparated at proper diſtances by joints, which are inſerted into each other, and faſtened by nerves or tendons. Cicero juſtly admires the beautiful ſtructure of theſe ligaments.

ligaments. What can be more pliant for all the various motions of the body? Yet what more firm or durable? Even after a body is dead, and the parts are ſeparated by corruption, we ſtill ſee theſe joints and ligaments, which with difficulty yield to diſſolution. Thus this machine of ours becomes ſtrait or bent, ſtiff or pliable, as we will. From the brain, which is the ſpring of all the nerves, flow the animal ſpirits. Theſe are ſo ſubtile, that they cannot be ſeen: yet they are ſo real and ſo active in their operations, that to them we owe all our ſtrength and motion. Theſe ſpirits in a moment are conveyed to the extremities of the body: ſometimes they flow gently and regularly: at others, as there is occaſion, they have a diſorderly impetuoſity; and they vary without end the poſtures, geſture, and other actions of the body.

SECT.

SECT. XXXII.

Of the ſkin.

LET us take a view of this fleſh. It is covered in certain places with a tender and delicate ſkin, for the ornament of the body. If the ſkin, which renders the object ſo agreeable, and of ſuch a ſweet colour, was removed; the object would grow hideous, and ſtrike us with horror. In other parts, the ſame ſkin is more thick, and harder to reſiſt the fatigue of thoſe parts. For inſtance, how much coarſer is the ſkin on the ſoles of the feet than that on the face! that on the hind-part of the head than that of the forehead! this ſkin is all perforated like a ſieve. But theſe holes, which we call pores, are imperceptible. Tho' the ſweat and tranſpiration are performed thro' them; the blood never eſcapes

eſcapes that way. This ſkin has all the delicacy neceſſary to be tranſparent, and to give the countenance a lively, mild, and agreeable complexion. If the ſkin were leſs cloſe or ſmooth, the viſage would appear, as it were, bloody or flayed. Who has had the art to temper and mix theſe colours, to make ſo fine a carnation, or fleſh-colour, which the painters admire, but can never perfectly imitate?

SECT. XXXIII.

Of the veins and arteries.

WE find this body of ours interſperſed with numberleſs branches or canals. The one ſort carry the blood from the centre to the extremities of the body, and are called arteries; the others bring it back from the extremities to the centre, and are termed veins. Thro' theſe

theſe different channels runs the blood, a ſoft unctuous liquor, proper by its oily quality to retain the fineſt ſpirits, juſt as we preſerve in reſinous bodies the moſt ſubtile and ſpirituous eſſences. This blood waters the fleſh, as the fountains and rivers do the earth. After being filtrated thro' the muſcles, it returns to its ſource more ſlowly, and leſs impregnated with ſpirits; but it renews and refines itſelf anew in this ſource, to circulate without end.

SECT. XXXIV.

Of the bones, and their arrangement.

BEHOLD this aſſemblage and proportion of the human members. The legs and thighs conſiſt of large bones, firmly jointed in each other, and ſecured by nerves. Theſe form two kinds of equal and regular pillars, which riſe to ſupport the whole fabric. But theſe

theſe pillars are flexible, and the pan of the knee is a bone of a ſhape almoſt circular, which is expreſly placed in the joint to fill it up, and defend it, when the bones yield to bend the knee. Each pillar has its pedeſtal compoſed of pieces of inlaid work, ſo nicely joined together, that they can grow pliant or ſtiff, as occaſion requires. This pedeſtal turns as we will beneath its column. The foot (which performs this part) is compoſed ſolely of nerves, tendons, and ſmall bones, ſtreightly interlaced together, that this part may be more flexible or firm, according to our different wants. Even the toes of the feet, with their articulations and nails, ſerve to feel the ground we tread upon to ſupport us with more addreſs and agility; and to preſerve better the equilibrium of the body, either in riſing or ſtooping. The two feet extend forward to hinder the body from falling on that ſide, when it

bends or turns itſelf. The two pillars reunite above, to ſuſtain the reſt of the body; and in this part they are broken off, that man may have the conveniency of repoſing himſelf, by reſting on the two largeſt muſcles of all the body.

THE middle of the edifice is proportioned to the height of the columns. It contains all the parts neceſſary to life, and which conſequently ought to be ſeated in the centre. For this reaſon, two rows of ribs, pretty cloſely joined, ariſing from the back-bone, (as the branches of a tree ſpring from the trunk) form a kind of circle to hide and ſhelter theſe more delicate and noble parts. But, as theſer ribs could not intirely incloſe the centre of the human body, without hindering the dilatation of the ſtomach and bowels, they end their circle at a certain point; beneath which they leave a void, that the inward parts

parts may inlarge themſelves with eaſe, both for reſpiration and nouriſhment.

As for the back-bone, we ſee nothing in all the works of art, wrought with ſuch ſkill. Were it compoſed of one ſingle bone, it would be too ſtiff and frangible. In this caſe, men could never ſtoop. To remedy this inconveniency, the author of this machine has formed a ſett of joints, called vertebræ ; which, being inſerted into each other, form a piece of inlaid work, which is ſtronger than if it were one ſolid piece. This compound is ſometimes pliant, at others ſtiff. It changes its motion in a moment, as we will. All theſe vertebræ have in the middle an aperture, which ſerves to receive and convey an extenſion of the ſubſtance of the brain * to the extremities of the body, and to ſend the animal ſpirits more ſpeedily by this canal.

* The medulla ſpinalis.

BUT how muſt we admire the nature of the bones themſelves? They are extreme hard, and we ſee that the corruption of the reſt of the body produces little alteration in them. Yet they are full of innumerable holes, which render them more light; and even their middle contains a marrow to nouriſh them. Yet they are thus bored exactly in thoſe places, thro' which the ligaments paſs, which bind them together. Beſides, their extremities are always larger than their middle; and compoſe, as it were, two round heads, to make one bone more eaſily ply with the other, that the whole may be moved without pain.

SECT.

SECT. XXXV.

Of the organs.

WITHIN the incloſure of the ribs are ranged in order the grand organs, ſuch as ſerve for the office of reſpiration or breathing, thoſe which digeſt our aliments, and thoſe which produce new blood. Reſpiration is neceſſary to temper the internal heat cauſed by the efferveſcence of the blood, and the impetuous courſe of the animal ſpirits. The air is like a kind of nouriſhment to us, by which man is revived every moment of his life. Digeſtion is no leſs neceſſary, to prepare the groſs aliments for being turned into blood. The blood is a liquor ſuited to inſinuate itſelf every-where; and to thicken in the extreme part into fleſh, to repair in thoſe members what they loſe inceſſantly

by perſpiration, and the diſſipation of the ſpirits. The lungs reſemble large covers, which, being of a ſpongy nature, eaſily dilate and compreſs themſelves; and as they receive and return inceſſantly a great deal of air, by this reciprocal motion they perform the office of a pair of bellows. The ſtomach has a diſſolvent in it, which cauſes hunger, and puts man in mind when to take his neceſſary food. This diſſolvent, which ſtimulates the ſtomach, by this uneaſineſs prepares it a lively pleaſure, when it is appeaſed by food. Then man deliciouſly regales himſelf, in a ſtrange manner; which would give him horror, if he could ſee his food when introduced into the ſtomach, and which even diſpleaſes him, when he has eat too much. The ſtomach is made like a bag. There the aliments, changed by a ſpeedy coction, are all blended into a mild liquor; which afterwards becomes a

kind

kind of milk, called chyle. This, being conveyed to the heart, receives by the abundance of the ſpirits the form, vivacity, and colour of blood. But while the pureſt juice of the aliments paſs from the ſtomach into the canals deſtined to refine it into chyle and blood, the groſſer parts of theſe ſame aliments are ſeparated (as the bran is from the flour by a ſieve), and forced downward, to be voided by the moſt ſecret paſſages of the body, that they may not incommode us. Thus the wonders of this human machine are ſo great, that we find them inexhauſtible, even in the moſt humbling functions; ſuch as will not admit a clearer explanation.

SECT. XXXVI.

Of the internal parts.

IT muſt be confeſſed, the internal parts of the human body are not ſo agreeable to the ſight, as the external. But at the ſame time we may obſerve, they were not made to be ſeen. It was even neceſſary, according to the rules of wiſdom, that they ſhould not be diſcovered without horror. By this means, one man cannot open the body of another, without extreme repugnance. This horror it is, which excites compaſſion and humanity in our heart, when we ſee another perſon wounded. Let us add, with St. Auguſtine, "That there is "in theſe internal parts a proportion, "an order, and a ſkill, which charms "the attentive mind infinitely more, "than that external beauty which only

"pleaſes

" pleaſes the eyes of the body." This inſide of man, which is at once ſo frightful and admirable, is preciſely what it ought to be, to ſhew a piece of clay wrought by a divine hand. It diſcovers at once the weakneſs of the creature, and the wiſdom of the Creator.

SECT. XXXVII.

Of the arms, and their uſe.

IN the upper part of this curious fabric we have been deſcribing, hang the two arms; which are terminated by hands, which have a perfect ſymmetry with each other. Theſe arms are faſtened to the ſhoulders in ſuch a manner, that they have a free motion with this inſertion. They have alſo new joints at the elbow and wriſt, that they may extend or contract themſelves with readineſs. They are of a juſt length, to reach

reach all the parts of the body. They are nervous, and full of muſcles, that they may with the reins be frequently in action, and ſuſtain the greateſt fatigues of the body. The hands are an aſſemblages of nerves, and ſmall bones, enchaſed the one within the other. Theſe have all the ſtrength and flexibility neceſſary to feel external bodies, to ſeize them, to faſten on them, to diſtinguiſh them, to ſeparate them one from another, or to force them back. The fingers, whoſe ends are armed with nails, are made to exerciſe, by the delicacy and variety of their motions, the nobleſt and moſt wonderful arts. The arms and hands, as they are extended or contracted, ſerve to aſſiſt the body to incline or bend, without endangering its fall. This machine has in itſelf, independently of ſuch reflections as come too late, a kind of ſpring, which ſuddenly

ſecures

ſecures its equilibrium on all theſe different occaſions.

SECT. XXXVIII.

Of the neck and head.

ABOVE the body riſes the neck, firm or flexible, as there is occaſion. Has one any heavy burden to carry on the head? The neck becomes ſtiff, as if it was one ſingle bone. Is it neceſſary to bend or turn the head? The neck becomes pliant in all ſhapes, as if the bones were all looſened. This neck, moderately raiſed above the ſhoulders, eaſily ſuſtains the head; which rules over the reſt of the body. Were the head leſs, it would have no proportion to the reſt of the machine. If it were larger, beſides its being diſproportionate and deformed, its weight would overload the neck; and expoſe man to the perpetual danger

danger of falling, to which ever ſide he ſhould lean. The head, ſtrengthened on all ſides by very thick and very ſolid bones, the better to ſecure the precious treaſure it contains, is jointed in the vertebræ of the neck, and has a quick communication, by that, with the other parts of the body. It contains the brain, a moiſt, ſoft, ſpongy ſubſtance, compoſed of tender threads interwoven. This is the centre of theſe wonders we ſhall ſpeak of in the ſequel. The ſkull is regularly bored with an exact ſymmetry and proportion, for the two eyes, the two ears, the mouth, and the noſe. There are nerves appointed for the ſenſations felt in moſt of theſe paſſages. The noſe, which has no nerves of this kind, has a cribriform bone, by which it admits ſmells and odours into the brain. Amongſt theſe organs of ſenſe, the principal are double, to preſerve on one ſide what ſome accident might deſtroy on the

the other. The two organs belonging to the ſame ſenſe are placed in ſymmetry in the front of the face, or on the ſides, that man may make a more eaſy uſe of them; either to the right or left, or before him; that is to ſay, towards the place he directs his motions and actions. Beſides, by the flexibility of the neck, all theſe organs are turned in a moment which ever ſide you pleaſe. The back of the head, which is the leaſt in a condition to defend itſelf, is the thickeſt. It is adorned with hair, which ſerves at the ſame time to preſerve it from the injuries of the weather: and this hair, coming round the viſage, gives it an additional grace. The face is what we call the fore-part of the head, where the principal features are aſſembled with a beautiful order and proportion; unleſs ſome accident alters ſo regular a work. The two eyes are equal, placed towards the middle on each ſide of the head,

head, that they may more eaſily diſcover diſtant objects to the right or left, and commodiouſly watch over the ſafety of all the parts of the body. The exact harmony with which theſe are placed, makes the chief ornament of the face. Their great author has illuminated them with a kind of celeſtial luſtre, to which nothing is comparable. Theſe eyes are a kind of mirrors; where are painted by turns, and without confuſion, in the bottom of the retina, all the objects of the whole world, in order to their being conveyed to the mind. But, tho' we perceive all objects by a double organ, we never ſee the objects themſelves double; becauſe the two leading nerves, which ſerve for ſight, are only two branches, which reunite in one ſtem, as the two bows of a ſpectacle are joined in the upper part. The two eyes are ſet off with two ſimilar eyebrows; and, that they may open and

ſhut

ſhut more eaſily, they are covered with eye-lids, edged with hair, to defend ſo delicate a part.

SECT. XXXIX.

Of the forehead, and other parts of the body.

THE forehead adds a grace and majeſty to the whole countenance. Without the noſe placed in the middle, the face would be flat and misſhapen. We may judge of this, by thoſe who have been ſo unhappy as to have this member mutilated. It is placed immediately above the mouth, to diſcern conveniently by the ſmell, what is proper food for man. The two noſtrils ſerve at once for the reſpiration and ſmell. Regard the lips: their lively colour, freſhneſs, figure, arrangement, and their proportion to the other features, embelliſh all the face. The mouth, by the

the correſpondence of its motions with thoſe of the eyes, animates, enlivens, ſaddens, ſweetens, or troubles us; and expreſſes each paſſion by ſenſible marks. Beſides the uſefulneſs of the lips in receiving food by their pliancy, and the variety of their motions, they aſſiſt in varying the ſounds which produce ſpeech. When they open, they diſcover a double row of teeth; which adorn the mouth. Theſe teeth conſiſt of ſmall bones, regularly enchaſed in two jaws; which have one ſpring to open, and another to ſhut: ſo that the teeth, like a mill, grind the food, to prepare it for digeſtion. But theſe aliments, ſo macerated, paſs into the ſtomach by a different canal, than that allotted for reſpiration; and theſe canals, tho' ſo nearly joined together, have nothing in common with each other.

SECT.

SECT. XL.

Of the tongue and the teeth.

THE tongue is a compoſition of ſmall muſcles and nerves, ſo pliable, that it winds like a ſerpent, with an inconceivable agility and pliancy. It does in the mouth, what the fingers or bow of a maſter on ſome muſical inſtrument produce. It ſometimes ſtrikes the teeth, ſometimes the palate. There is a pipe *, which runs within the throat, from the palate to the breaſt. It is compoſed of rings of cartilages, exactly enchaſed in one another; and furniſhed within with a very ſmooth coat or membrane, the better to aſſiſt the ſound of the air iſſuing from the lungs. This pipe has towards the palate an end, which is open like a flute, by a ſlit; which widens, or contracts

* The wind-pipe.

itſelf purpoſely, to deepen the voice, or render it more clear. But, leſt the aliments, which have their ſeparate canal, ſhould ſlip into this organ of reſpiration, there is a kind of ſucker, which forms on the orifice of this canal of the voice a ſort of draw-bridge, to let the aliments paſs over; without ſuffering the leaſt particle, or the ſmalleſt drop, to fall into the ſlit juſt mentioned. This ſucker is very moveable, and turns with great pliancy; ſo that, by its vibrations on the ſaid orifice, it forms the ſofteſt modulations of the voice. This ſlight example is ſufficient to ſhew by the way, without entering into any anatomical detail, with what marvellous art the internal parts of man are compoſed. The organ I have juſt now deſcribed is the moſt perfect of all muſical inſtruments, which are only themſelves perfect, as far as they can imitate it.

SECT.

SECT. XLI.

Of the ſmell, the taſte, and hearing.

WHO can explain the delicacy of thoſe organs by which we diſcern the innumerable taſtes and ſmells of bodies? Or how happens it, that ſo many voices ſtrike my ears at once without confuſion, and that theſe ſounds, after they are gone off, leave on me ſuch diſtinct and lively impreſſions? How carefully has the great author of our frame given the eyes a humid and moveable cover to cloſe them; and, at the ſame time, left our ears open! "It "is (ſays Cicero) becauſe the eyes have "need to ſhut themſelves up from the "light, for ſleep; and becauſe the "ears ſhould remain open, while the "eyes are cloſed; to warn or waken "us by the noiſe, when we run any

" riſque of being ſurpriſed." Who is it imprints in my eye, in a moment, the heavens, the ſea, and the earth; all ſituated at ſuch an infinite diſtance? In what manner became arranged and diſtinguiſhed in ſo ſmall an organ the faithful images of all the objects in the univerſe, from the ſun to the minuteſt atom? Is not the ſubſtance of the brain, which preſerves with ſuch order the genuine images of ſo many objects, which have ſtruck us ſince we came into the world, an aſtoniſhing prodigy? We juſtly admire the invention of books, in which are preſerved ſo many actions, and ſuch a collection of reflections. But what compariſon is there between the fineſt book, and the brain of a learned man? Without doubt, the latter is infinitely the moſt precious treaſure, and of a nobler invention than the book. It is in this little conſervatory, that we find at call all the ideas or images we have occaſion

occaſion for. We call them; they come: we diſmiſs them; they hide themſelves, I know not where; and diſappear, to give place to others. We ſhut and open the imagination like a book: we turn over the leaves, as it were, and ſuddenly paſs from one end to the other. Our memory even affords us a table or index, to mark the places where our moſt ſecret ideas lie concealed. The numberleſs characters, which the human mind internally runs over with ſuch rapidity, leave no trace in the brain of a man dead. This admirable book becomes then only a ſoft ſubſtance, a kind of clew or bottom, formed of tender fibres interwoven. What power has known how to lodge, in ſo unſightly a kind of clay, ſuch precious ideas, ranged with ſuch beautiful art?

SECT. XLII.

Of the proportion of the human body.

SUCH is the body of man, in general: I do not pretend to enter into the particulars of anatomy, all my deſign being to diſcover the wiſdom which is in nature, by a ſingle view, without any ſeries of reflections. The human body might, no doubt, have been formed much greater, or much leſs. If man, for example, was but a foot high, he would be inſulted by the moſt part of animals, who would tread him under their feet. Were he as tall as the higheſt ſteeples, a ſmall number of men would in a few days conſume all the proviſions of a country. He would neither find horſes, or other beaſts of burden, to carry him; nor any carriage fit for him. He would want materials ſufficient to build houſes

proportioned

proportioned to his ſtature. The earth would be but ill-peopled; and even the few inhabitants would be deſtitute of moſt conveniencies. Who has confined the ſize of man to a certain meaſure? Who has regulated the ſtature of all other animals, in proportion to that of man? Man is the only creature who walks erect. This gives him an air of dignity and majeſty, which diſtinguiſhes even his external form from every other animated being. Not only his figure is more noble, but he is the ſtrongeſt and moſt dextrous of all animals, in proportion to his bulk. Let us examine narrowly the maſs and weight of the moſt formidable beaſts: we ſhall find more matter than in the body of a man; and yet a vigorous man has more real ſtrength, than moſt of theſe wild beaſts. They are only dangerous by their teeth and claws. But man, who is unprovided with ſuch ſtrong natural

arms, has hands, whoſe ſkill in forging arms ſurpaſſes all that nature has given to the brutes. Thus he pierces with his arrows, or enſnares in his toils, the ſtrongeſt and moſt furious animals. He even knows how to tame them in their captivity, and to accommodate them to his pleaſure. He cauſes himſelf to be careſſed by lions and tygers, and rides on the backs of elephants.

SECT. XLIII.

Of the ſoul. She alone is endowed with the privileges of reflection and thought.

THO' the body of man appears the maſter-piece of nature, it is not comparable to his mind. It is certain, there are bodies incapable of thought. This faculty was never yet aſcribed to ſtones, woods, or metals; tho' they are undoubtedly bodies. It is even ſo natural to believe that matter cannot think,

think, that the moſt unprejudiced men cannot forbear laughing, when you tell them, that beaſts are only mere machines, becauſe they think it impoſſible to conceive, that mere machines could have the knowledge they diſcover in beaſts. They ſee, that to aſcribe intelligence to ſuch machines, is acting like children; who, in their play, talk to their babies as if they underſtood them. Hence it comes, that the ancients themſelves, who allowed nothing for real, but what was corporeal, yet were willing to grant the ſoul of man to be compoſed of a fifth element, or a kind of nameleſs quinteſſence, unknown below, indiviſible, immoveable, and intirely celeſtial and divine, becauſe they could not conceive, that the terreſtrial matter of our four elements was capable of thought *.

SECT.

* Ariſtoteles quintam quandam Nuturam eſſe, e qua fit mens. Cogitare enim, & providere, & diſcere, & docere . . . . in horum quatuor generum nullo ineſſe putat. Quintum genus adhibet vacans nomine.

CICERO, Tuſcul. Quæſt. lib. i.

SECT. XLIV.

What is material cannot think.

BUT let us grant the ancients all they would have, and conteſt with none of their ſects in philoſophy. I will offer an alternative, which no philoſopher can avoid. Either matter may become endowed with reflection, without adding any thing to it; or elſe matter is incapable of thought; and that which reflects within us, is a being diſtinguiſhed from matter, tho' united to it. If matter can become reflective without any addition, we muſt own, that all matter has not this quality; and that even the matter which thinks now, was void of thought fifty years ago. For inſtance, the ſubſtance of the body of a young man had no knowledge ten years before his birth: we muſt then ſay, that matter

matter may acquire reflection by a certain arrangement or motion of its parts. Let us take, for example, a ſtone, or a heap of ſand. Theſe portions of matter certainly do not think. To give them this faculty, you muſt figure, diſpoſe, and move their parts in a certain proportion and degree. Who has ſo nicely diſcovered this proportion, this arrangement and motion, in ſuch a ſenſe, and not in another? And has adjuſted this motion to a preciſe point, above or beneath which matter can never think? Who has given all theſe juſt and exact modifications to a vile and ſhapeleſs piece of matter, to form thence the body of an infant, which, in time, ſhall become a reaſonable man? If, on the contrary, you aſſert, that matter cannot think without ſome addition, and requires for this end to be united to a foreign being; I aſk, in return, what is this other thinking exiſtence, while the

matter

matter united to it remains only capable of motion? Here are two natures quite unreſembling. The one we know only by its actions, and local motion; the other by its perceptions and reaſonings. The one gives you no idea of the other, nor have their ideas any thing common with each other.

SECT. XLV.

Of the union of the ſoul and the body, of which GOD *alone can be the author.*

WHENCE happens it, that beings ſo oppoſite, are ſo intimately united in man? To what ſhall we aſcribe it, that the movements of the body ſo ſpeedily and infallibly communicate certain thoughts to the ſoul? As, on the other hand, the reflections of the ſoul produce equal motions in the body? Whence proceeds ſo regular a ſociety of

of ſeventy or eighty years, without the leaſt interruption ? How happens it, that this aſſociation of two beings, whoſe operations are ſo different, form ſo juſt a compound, that many are tempted to believe the whole ſimple and indiviſible ? What hand has been able to join theſe two extremes ? They had no connexion between themſelves. Matter could never make an agreement with mind; for, of herſelf, ſhe had neither thought nor will to make any conditions, On the other hand, mind remembers no contract of this kind with matter; nor could it be tied up by a bargain it had forgotten. If the ſoul had voluntarily reſolved to ſubject itſelf to the body, it would carry this ſubjection no farther than it pleaſed; yet it is as certain, that, in ſpite of itſelf, it depends on the body; nor can it deliver itſelf, unleſs it deſtroys the organs of the body by a violent death. Beſides, even granting that the

ſoul

ſoul was of her own accord ſubjected to matter, it would not follow, that matter was mutually ſubjected to her. The ſoul ſhall indeed feel certain ſenſation, upon certain motions of the body; but the body is not, in return, always inclined to ſuit its motions to the ſentiments of the mind. Now it is certain, that this dependence is reciprocal. Nothing is moreabſolute than the empire of the ſoul over the body. It wills, and all the members of the body are inſtantly in motion, as if actuated by the moſt powerful ſprings; on the contrary, nothing is more manifeſt than the power the body has over the ſoul. The body moves, and the ſame moment the ſoul is forced to contemplate certain objects with pleaſure or grief. What hand, equally ſovereign of theſe two different natures, has been able to impoſe this yoke on both, and retain them both in ſo ſtrict and inviolable a ſociety? Shall

we

we ſay, it is chance? Or, if we do, ſhall we be either intelligible to ourſelves or others? Has hazard, by a concourſe of atoms, united the parts of the body with the ſoul? If this latter could faſten itſelf to the body, it muſt have parts, and conſequently be really corporeal; in which caſe, we fall into the firſt anſwer already confuted. If, on the other hand, the ſoul has no parts, nothing can join it to the body, chance having no power to accompliſh ſo great a work.

To conclude, my alternative always returns, and it is deciſive. If the ſoul and body are but the ſame compoſition of matter, whence comes it, that this matter, deſtitute of thought yeſterday, begins to think to-day? Who has given it, what it had not; and which is nobler than itſelf, when void of thought? He who gave it thought, had he it not himſelf? or how could he beſtow what he never

never had? Suppoſing even thought to ariſe from a certain configuration, arrangement, and a degree of motion, in a certain ſenſe, of all the parts of matter, what artiſt has had the wiſdom to diſcover theſe juſt and nice combinations, to form a thinking machine? If, on the contrary, the ſoul and body are two different natures, what power, ſuperior to them, could unite them together, without the ſoul's having any ſhare in it, or even knowing how the union is accompliſhed? Who commands thus, with ſo ſovereign a ſway, ſouls and bodies, to hold them in ſo cloſe a correſpondence, and under ſo incomprehenſible a kind of government?

SECT.

SECT. XLVI.

The empire of the ſoul over the body is abſolute.

OBSERVE, that the dominion of my ſoul over my body is ſovereign in its limited extent; ſince my ſimple will, without effort or preparation, inſtantly ſets in motion all the members of my body, according to the rules of the mechanics. As the ſcripture repreſents GOD ſaying, after the creation of the univerſe, "Let there be light, and it was ſo;" in like manner, the ſole internal command of my ſoul, without effort or preparation, ſees its dictates obeyed. I mean, that, by this ſimple and momentaneous order, my body is directed to move, and it moves. By this cloſe connexion, all the parts of my body are put in action. Already the nerves are

braced, the ſprings haſten to concur together, and the whole machine obeys, as if every one of its moſt ſecret organs heard ſome ſovereign and reſiſtleſs call. Here is, no doubt, a power the moſt ſimple and efficacious that can be conceived. There is not a ſimilar example of it in all the beings we know. It is preciſely what men, perſuaded of the divinity, attribute to him in all the univerſe.

SHALL I aſcribe it to my feeble underſtanding, or not rather to the power my ſoul has over my body, ſo different from it? Shall I believe, that my will has a title to this ſupreme power, which is in itſelf ſo weak and imperfect? But whence comes it, that, amongſt ſo many bodies, the mind has only power over one? No foreign body moves according to its deſires. Who has aſſigned it, over a ſingle body, the dominion it had over no other? Shall we once more have recourſe to chance?

SECT. XLVII.

The power of the ſoul over the body is not only abſolute, but even blind.

DOES it not appear ſtrange, that ſo ſovereign a domination ſhould be at the ſame time blind? The moſt ignorant peaſant knows how to move his body, as well as the wiſeſt anatomiſt. The ſoul of the countryman commands his muſcles, his nerves, and his tendons, which he knows nothing about, and of which he never heard ſpeak. Without being able to diſtinguiſh, or know where they lie, he finds them, addreſſes himſelf to thoſe he wants, and never miſtakes the one for the other. A rope-dancer only wills, and that moment his ſpirits run with impetuoſity, ſometimes to certain nerves, ſometimes to others, which dilate or contract themſelves accordingly.

Aſk him, which are thoſe he put in motion, and how he began to ſet them in action? He does not underſtand what you mean. He is profoundly ignorant of all that paſſes in the internal ſprings of his machine. A player on the lute, who knows perfectly all the ſtrings of his inſtrument, has them under his eyes, and touches them one after another, is miſtaken. But the ſoul, which governs the machine of the human body, and moves all its reſorts exactly, without ſeeing or diſcerning them, or even knowing their figure, ſituation, or force, is never out in its account. What a prodigy! my ſoul commands over what it does not know, and what it cannot ſee; and yet, by this maſs incapable of thought, it is infallibly obeyed. What blindneſs is here! what power! the blindneſs is on the ſide of man; but whoſe is the power? To whom ſhall we aſcribe it, if not to him, who ſees what man does not ſee,

and

and endues him with this ſpiritual part which ſets him above himſelf? My ſoul would in vain ſet in motion the bodies which ſurround it, and which it knows diſtinctly: none of them ſtir, nor has it any power by its will to move the ſmalleſt atom. It has but one body aſſigned to its government and direction. With regard to this body the ſoul is intire maſter. St. Auguſtine has ſet theſe reflections in a juſt light: "The in-"ternal part of our body (ſays he) can "be only animated by our ſouls; but "our ſouls animate them eaſier than "they know them. The ſoul is a "ſtranger to the body, ſubjected to it. "It does not know why it puts the "nerves in motion only when it "pleaſes; or why, on the contrary, "the pulſation of the veins is uninter-"rupted, even tho' againſt its will. "It is ignorant what part of the body "it firſt moves to ſet the reſt in mo-

" tion. It does not even know, why " it perceives contrary to its will, or " moves the members when it pleaſes. " It does all things in the body. " Whence comes it, that it is a ſtran- " ger to what it does, or the manner in " which it is done? Thoſe ſkilled in " anatomy (adds the good father) teach " their pupils what paſſes in them, and " how it is done. Why (ſays the ſaint) " have I no need of a leſſon to know, " that there is in the heavens, at a pro- " digious diſtance from me, a ſun and " ſtars, and yet want a maſter to learn " where begins the motion of . . . . ? " When I ſtir my finger, I do not " know how what I do myſelf is done. " We are too elevated with regard to " ourſelves, even when we comprehend " nothing."

SECT. XLVIII.

The power of the ſoul over the body appears in all the images traced in the brain.

IN ſhort, nothing is more aſtoniſhing than this abſolute ſway of the ſoul over corporeal organs, with which it is unacquainted; and the continual uſe it makes of them, without diſcerning them. This power principally ſhews itſelf, with regard to the images traced in the brain. I know, for inſtance, all the bodies in the univerſe, which have ſtruck my ſenſes for a great number of years. I have the diſtinct images which repreſent them to me; ſo that I conceive them preſent, tho' they are no more. My brain reſembles a cabinet of pictures; of which all the pieces aſſemble together, and range themſelves, according to the taſte or fancy of the maſter of the

houſe. The painters, with all their ſkill, can never attain but an imperfect likeneſs: but the pictures in my head, they are ſo faithful, that it is by conſulting them I perceive the defects of limners, and learn to correct them within myſelf. Theſe images more reſembling than the maſter-pieces of art in painting, fix themſelves in my head without my art. Is it a book, whoſe characters have ranged together of themſelves? If there be art, it is none of mine; for I find within me this collection of images, without my ever having had the leaſt thought of either graving them there, or placing them in order. But, what is more, theſe images preſent themſelves, or retire, as I pleaſe, without the leaſt confuſion. I recal them; they come: I ſend them away; they vaniſh I know not where. They aſſemble or ſeparate, as I deſire. I neither know where they reſide, nor what they are; yet I always find

find them ready when I want them. The agitation of ſo many old and new ideas, which revive, unite, or ſeparate, never diſturbs the certain order they preſerve. If ſome fail to appear at the firſt call, at leaſt I am ſure they are not far off; but, perhaps, hid in ſome out-of-the-way corner of the brain. I am not, however, ignorant of theſe, as of things I never knew at all. On the contrary, I know confuſedly what I ſearch for. If any other image offers itſelf in the place of that I want, I reject it without heſitation. But what becomes of objects half-forgot? I have them within me, ſince I ſeek and find them there: yet, where are they, or what are they, when I ſearch for them a long time in vain? "I am no more (ſays St. Auguſtine) "what I was, when I think on what I "cannot recollect. I know not how it "happens (continues the father) that "I ſhould be thus obſtructed, a ſtranger

"to

" to myſelf; no more than how I know " myſelf, like one recollected and " brought back. I am like another " man, tranſported to a ſtrange place, " when I ſeek and miſs what I have " intruſted to my memory. Till this is " done, I am like one abſent from " home. I get thither by finding that " I want. But where is what we ſeek, " if it is not within us? And what do " we ſeek, if it is not ourſelves? Such " a myſtery confounds me!" I can remember diſtinctly I have known, what I now know no more. I can even remember my forgetting it. I can recall the diſtinct images of every acquaintance, in every age of life I have formerly known them. The ſame perſon repaſſes ſeveral times in my head. At firſt I ſee it an infant, next a youth, then grown. I place wrinkles on the ſame viſage, where once flouriſhed all the graces of youth. I join that which exiſts no more;

with

with that which remains ſtill; without confounding theſe extremes. I preſerve a kind of Je ne ſçai quois, which by turns is all things I have known ſince my coming into the world. From this unknown treaſure riſe all the perfumes, all harmony, all kinds of taſte, all the degrees of light and colours, with their different ſhades and modifications; in ſhort, all the figures which have paſſed my ſenſes, and are impreſſed on my brain. When I pleaſe, I can renew the joy I felt thirty years ago. It comes at my call; but it is often no more the ſame, and it appears without giving me comfort. I juſt remember I was well-pleaſed at that diſtance of time; but in this remembrance I feel no pleaſure. On the other hand, I can recollect my ancient troubles. They become preſent; for I feel them diſtinctly. But they are no more the ſame; they trouble me no more; their ſting is gone: I ſee their rigour,

but

but it gives me no longer pain; or, if it does, it is only in imagination. This remembrance of an anguiſh, formerly ſtinging, is but a jeſt. The idea of griefs paſt turns pleaſant. Is the caſe the ſame with regard to pleaſures? No: a virtuous mind afflicts itſelf at the remembrance of its guilty joys. They riſe to view, with all that is ſoft and bewitching; but they have loſt their force; for ſuch pleaſures never are remembered but with pain.

SECT. XLIX.

Two wonders of the memory and the brain.

HERE then are two wonders, equally incompatible. The one is, that my brain is a kind of book, where lie an infinite number of images and characters, placed in an order in which I had no hand, and which chance could never effect.

effect. For I never had the leaſt thought either to fix any thing in my brain, nor to give the leaſt arrangement to the characters traced there; I only amuſed myſelf with ſeeing the objects, when they preſented themſelves to my ſenſes. This marvellous book was not produced by chance, and all the art of man is too imperfect ever to attain ſo high a degree of perfection. To what hand then muſt we aſcribe it?

THE ſecond wonder I find in my brain, is to perceive, that my ſpirit reads with ſo much facility, whatever it pleaſes, in this internal book. It reads characters it does not underſtand. I have never obſerved the leaſt traces of theſe impreſſed in my brain, nor the ſubſtance of the brain itſelf, which forms the paper of this book. All theſe innumerable characters ſhift their places, and then reſume them again, at my command.

I poſ-

I poſſeſs a kind of divine power over a work I don't know, and which is incapable of thought. What underſtands nothing elſe, underſtands my thought, and executes it in a moment. The mind of man has no power over other bodies. I ſee them in reviewing all nature. It is but one ſingle body my ſoul can give law to, and act upon, as if it was a divinity; and this it does without controul. Who has united it to this body, and given it ſuch empire over it?

SECT.

SECT. L.

The ſoul of man is compoſed of grandeur and weakneſs. Its grandeur conſiſts in two points.

1. The ſoul has the idea of infinitude.

LET us conclude theſe remarks by a ſhort reflection on the ſtructure of my mind: I find in it an incomprehenſible mixture of greatneſs and weakneſs. Its grandeur is real. It collects together without confuſion the paſt and the preſent, and even by its conjectures pierces into futurity. It has the idea of bodies, and that of minds. It has even ſome perception of infinitude itſelf; for it affirms whatever agrees to it, and denies whatever does not. Tell him, that infinitude is triangular; he will reply, without heſitation, that what has no limits can have no figure. Let him aſk his

his queriſt in return, to aſſign him the firſt of the unities which compoſe an infinite number; he will anſwer, that there cannot be beginning, end, or number, in what is infinite; becauſe if you could remark a firſt or laſt unity wanting, you might add another freſh unity, and conſequently increaſe the number. Now a number capable of addition can never be infinite.

Sect. LI.

The ſoul only knows what is finite, by its idea of what is infinite.

IT is even from the idea of infinitude that the ſoul knows what is finite. Whoever deſcribes a ſick man, ſays, he is a man who wants health. Who repreſents a feeble man, affirms he has no ſtrength. We know no diſeaſe, which is only a privation of health, but by regarding

garding health as a real bleſſing, of which a man is then deprived. We conceive feebleneſs, only by repreſenting ſtrength as a manifeſt advantage, which man has loſt. We conceive darkneſs (which has nothing poſitive) only by denying, and conſequently granting, the light of the day: juſt ſo, we perceive the finite, by aſcribing to it a boundary, which is a negation of a greater extent. This then is a privation of infinitude. Now we could never have an idea of this, if we did not conceive what is infinite; as we cannot conceive ſickneſs, without a knowledge of health, of which it is but the privation. Whence ariſes in us this notion of infinitude?

SECT. LII.

2. *The ideas of the mind are univerſal, eternal, and unchangeable.*

HOW great is the human ſoul! it carries in itſelf ſomething aſtoniſhing and infinitely ſurpaſſing itſelf. Its ideas are univerſal, eternal, and unchangeable. They are univerſal: for when I ſay it is impoſſible to be, and not to be; the whole is greater than a part; a line perfectly circular has no direct parts; between two points given, a direct line is the ſhorteſt; the center of a true circle is equally diſtant from every part of the circumference; an equilateral triangle can neither have an obtuſe nor right angle; all theſe truths will admit of no exception. There never could exiſt line, circle, or triangle, but on theſe conditions. Theſe rules are, properly ſpeaking,

ſpeaking, prior to time, and will always be of an incomprehenſible duration. Let the univerſe be overturned or annihilated; let there remain no rational ſpirit to reaſon on exiſtences, lines, circles, and triangles, it will always remain equally true in itſelf, that the ſame thing cannot be, and not be, at one and the ſame time; that a perfect circle can have no portion of a ſtrait line; that the center of a true circle cannot be nearer any one part of the circumference than the other. Men indeed may actually neglect to attend to theſe truths, and it may even ſo happen, that ſome miinds may be incapable of comprehending them; but yet of themſelves theſe truths are equally invariable, tho' no ſpirit perceived them; juſt in the manner that the rays of the ſun would not be leſs true, tho' all men were blind, or none had eyes to be enlightened. "In maintaining "that two and two make four (ſays

" St. Auguſtine) I am not only perſuad-
" ed that I ſay true, but that this pro-
" poſition has been undeniable in all
" ages, and will continue ſo to the end
" of the world." Thoſe ideas, which we bear impreſſed on our minds, have no limits; and can ſuffer nothing. Nobody can tell me, that what I have aſſerted with regard to the center of perfect circles, is not true only as to a certain number of circles. This propoſition, being ſelf-evident, is true for all circles to the end of time. Theſe unlimited ideas can never be changed, nor effaced, nor altered in us. They are the fund of our reaſon. Whatever conſtraint we put upon our mind, it is impoſſible once ſeriouſly to doubt, what our ideas repreſent to us with clearneſs. For example, I can never enter into a ſerious doubt to know, whether the whole be greater than one of its parts? If the center of a perfect circle be

equidiſtant

equidiſtant from all parts of its circumference? The idea of infinite in me, is like that of numbers, lines, circles, a whole, a part. To change our ideas would be to deſtroy our reaſon itſelf. Let us judge of the grandeur of our mind, by the immutable notion of infinite, impreſſed within us; and which can never be effaced. But, leſt ſo real a grandeur ſhould dazzle us, or dangerouſly flatter us, let us next take a view of our own weakneſs.

SECT. LIII.

Of the weakneſs of the human mind.

THIS ſame mind, which perceives inceſſantly what is infinite, and by this rule knows all finite things, is alſo ignorant, to the end, of all the objects which ſurround it. It is profoundly unacquainted with itſelf. It marches, as

it were, groping thro' an abyſs of darkneſs. It neither knows what it is, how it has become joined to a body, nor how it has ſo much command over the ſprings of this body, which he does not know. He is even ignorant of his own thoughts and inclinations. He knows not with certitude, either which he ſhall believe, or what he ſhall will. Often he imagines he has believed and willed, what he neither believed nor willed. He deceives himſelf; but what is beſt, is when he comes to find it out. To the error of his thoughts he joins the depravity of his manners. He is reduced to groan under the experience of his own corruption. Such is the ſoul of man, feeble, uncertain, limited, and full of errors. Who has placed the idea of infinite, that is to ſay, of perfection, in a ſubject ſo limited? If he gave it to himſelf, this idea ſo high and pure, which carries in itſelf a repreſentation of the

infinite,

infinite, what finite being, diſtinguiſhed from himſelf, could beſtow on him what is ſo diſproportioned with all that is limited? Suppoſing, that the mind of a man is like a mirror, in which the images of all adjoining objects impreſs themſelves, what being has placed in us the idea of infinite, if infinite never was? Who could fix in a glaſs the image of a chimerical object, which has no exiſtence, and never appeared before that glaſs? This idea of infinite is not a confuſed maſs of finite objects, which the mind often miſtakes for the true infinite. It is the true infinite impreſſed on our minds. We know it ſo well, that we preciſely diſtinguiſh it from every thing which is not itſelf; and no ſubtlety can ſubſtitute another object in its place. We know it ſo well, that we exclude from it every property which implies the leaſt bounds. To conclude, we know it ſo well, that

by it alone we know all the reſt; as the night is known by the day, ſickneſs by health. Once more, whence comes an idea ſo grand? Shall we derive it from nothing? Could a limited being imagine and invent the infinite, if there were no ſuch thing? Our ſhort-ſighted and feeble mind could never form to itſelf this idea, for which it had no authority. Exterior objects could never furniſh us with this idea; for they could only give us the idea of what they are, and they have nothing but what is imperfect and limited. Whence then ſhall we derive this diſtinct image, which no way reſembles any thing about us, or of what we know here below? Whence comes it? Where is this infinite, which we cannot comprehend, becauſe it is the true infinite; and which nevertheleſs we cannot miſtake, becauſe we diſtinguiſh it from every thing that is inferior? Where is it? If it had no exiſtence,

exiſtence, could it come to root itſelf in the bottom of our mind?

SECT. LIV.

The ideas of man are the immutable rules of his judgment.

BUT, beſides the idea of infinite, man has other univerſal and unchangeable notions, which are the rule of all his judgments. I cannot judge any thing otherwiſe than by conſulting theſe; nor can I decide againſt what they repreſent to me. My thoughts, far from being able to correct theſe rules, are, in ſpite of me, themſelves corrected by them; and they are irreſiſtibly ſubjected to this deciſion. Whatever conſtraint I put on myſelf (as I have formerly obſerved) I can never bring myſelf to doubt, that two and two make four; that the whole is greater than its part; that the center of a perfect

fect circle is equally diſtant from all points of the cicumference. I am not at liberty to deny theſe propoſitions. If I ſhould renounce theſe truths, or others like them, I have a power within me ſuperior to myſelf, and which ſoon forces me to own my error. This fixed and immutable rule is ſo internally rooted, that I am tempted to take it for myſelf; whereas it is far above me, as it corrects, redreſſes me, puts me on a juſt guard againſt myſelf, and warns me of my own weakneſs. It is ſomething which whiſpers me every hour, provided I liſten to it; and I am never deceived, but in not attending to it. It is what inſpires and preſerves me inceſſantly, in every danger and error, if I would act obediently and without raſhneſs: for it would learn me to judge truly of things within the reach of my capacity; and about which there is a neceſſity to form a judgment: with regard to others, it would learn me

me not to trouble myſelf about them. This internal rule is no other than my reaſon. But I ſpeak of my reaſon, without penetrating the force of the term; as I talk of nature and inſtinct, without knowing what the expreſſions ſignify.

SECT. LV.

What reaſon is in man.

IN truth, my reaſon is myſelf; for I muſt perpetually enter into myſelf to find it. But the ſuperior reaſon, which corrects me in neceſſity, and which I conſult, is not mine; nor does it make any part of myſelf. This rule is perfect and immutable. I am changeable and imperfect. When I go wrong, this reaſon does not loſe its integrity. When I am undeceived, it is not always owing to it. It indeed never quits its authority, to recall and bring me back to my duty.

duty. It is an internal maſter, which impoſes ſilence on me, forces me to ſpeak, to believe, to doubt; teaches me to own my errors, or confirm my judgments. In hearkening to it, I receive inſtruction; in hearkening to myſelf, I go aſtray. This maſter is every-where, and his voice is heard from one end of the univerſe to the other; by all mankind, as well as me. While he corrects me in France, he corrects other men in China, Japan, Mexico, and Peru, by the ſame principles.

SECT. LVI.

Reaſon is the ſame in men of all ages, and all countries.

TWO men, who never ſaw one another in their life, who had never heard ſpeak of each other, and had no connexion with a third man to give them

them common notions; yet talk together at the extremities of the earth on a certain number of truths, as if they were perfectly agreed. We know infallibly beforehand in one hemiſphere, what they will think or anſwer about them in the other. Men of all ages and countries, be their education what it will, feel themſelves ſubjected to think and talk much in the ſame manner. The maſter, who teaches us inceſſantly, makes us all think the ſame way. When we haſten to judge, without hearing his voice, or diſtruſting ourſelves, we think and act like men in a delirium. Thus it appears, that what moſt properly belongs to us, I would ſay our reaſon, is that which appears the leaſt our own, and the moſt borrowed. We receive inceſſantly and momentaneouſly a reaſon ſuperior to us; as we conſtantly breathe an air, which is an external body; or as we diſtinguiſh objects near us by the light of the ſun, whoſe rays are

bodies

bodies wholly ſtrange to us. This ſuperior reaſon governs to a certain point, with an abſolute cammand, even the leaſt reaſonable men; making them act of their own accord, in ſpite of themſelves, on theſe points. It is this makes a ſavage of Canada ſpeak many things, which the Greek and Roman philoſophers have thought. It is this has led the Chineſe geometricians to have found out the ſame truths with the Europeans; tho' two people, ſo remote, were wholly unknown to each other. This makes it believed in Japan, as in France, that two and two make four; nor is there any fear, that any nation will change their opinion on this head. It is reaſon makes men believe to-day, the ſame way they did four thouſand years ago. It is this inſpires with uniform thoughts men the moſt jealous and irreconcileable between themſelves. It is by this that men in all climes, and all ages, have

been

been combined together to a certain immoveable center, which holds them united by certain invariable rules, named firſt principles; notwithſtanding the infinity variety of opinions, which ariſe in them from their paſſions, their diſtractions, and their caprices, about other matters leſs clear. It is on this occaſion mankind, depraved as they are, have not openly dared to aſſign the name of virtue to vice; and that they are ſtill reduced to preſerve the appearances of juſtice, ſincerity, moderation, and benevolence, in order to attract the eſteem of others. We don't eaſily conſtrain ourſelves to regard or deſpiſe objects. We cannot break thro' this eternal barrier and juſtice. The internal maſter, reaſon, reproaches within, with an abſolute power. He ſuffers nothing. He bounds the moſt impudent extravagancies of men. After ſo many ages, in which vice has reigned without check or

obſtacle,

obſtacle, virtue is ſtill named virtue by all, nor can its moſt brutal and inveterate enemies rob it of its title. Hence it comes, that vice, tho' triumphant, is forced to diſguiſe itſelf under the maſk of hypocriſy, or falſe probity, to draw on herſelf that eſteem ſhe would have no pretence to make. Thus, in ſpite of her aſſurance, ſhe pays a forced homage to virtue, by borrowing her robes to cheat the world. It is true, virtuous men are ſeverely ſubject to cenſure; and we are indeed, in this life, none of us free from reprehenſion. But the moſt vicious men can never totally extinguiſh, in themſelves, the idea of true virtue. There was never yet that man on earth, who could prevail on himſelf, or others, to allow, as a received maxim, that to be knaviſh, paſſionate, and miſchievous, is more honourable than to be honeſt, moderate, good-natured, and benevolent.

SECT. LVII.

Reaſon in man is independent of and above him.

I HAVE already evinced, that the inward and univerſal maſter at all times, and in all places, ſpeaks the ſame truths. We are not that maſter; though it is true, we often ſpeak without, and higher than him. But then we miſtake, ſtutter, and do not ſo much as underſtand ourſelves. We are even afraid of being made ſenſible of our miſtakes; and we ſhut up our ears, leſt we ſhould be humbled by his corrections. Certainly the man who is apprehenſive of being corrected and reproved by that uncorruptible reaſon, and ever goes aſtray when he does not follow it, is not that perfect, univerſal, and immutable reaſon, that corrects him in ſpite of himſelf.

ſelf. In all things we find, as it were, two principles within us: the one gives, the other receives; the one fails, or is defective, the other makes up; the one miſtakes, the other rectifies; the one goes awry through his inclination, the other ſets him right. It was the miſtaken and ill-underſtood experience of this, that led the Marcionites and Manicheans into error. Every man is conſcious within himſelf of a limited and inferior reaſon, that goes aſtray and errs, as ſoon as it gets looſe from an intire ſubordination; and which mends its error no other way, but by returning under the yoke of another ſuperior, univerſal, and immutable reaſon. Thus every thing within us argues an inferior, limited, communicated, and borrowed reaſon, that wants every moment to be rectified by another. All men are rational, by means of the ſame reaſon that communicates itſelf to them, according to va-

rious

rious degrees. There are a certain number of wiſe men; but the wiſdom from which they draw theirs, as from an inexhauſtible ſource, and which makes them what they are, is but one.

SECT. LVIII.

It is the primitive truth that lights all minds, by communicating itſelf to them.

WHERE is that wiſdom? Where is that reaſon, at once both common and ſuperior to all the limited and imperfect reaſon of mankind? Where is that oracle, which is never ſilent, and againſt which all the vain prejudices of men cannot prevail? Where is that reaſon which we have ever occaſion to conſult, and which prevents us by creating the deſire of hearing its voice? Where is that lively light, "which lighteth every man "that cometh into the world?" Where

is that pure and ſoft light, which not only lights thoſe eyes that are open, but which opens eyes that are ſhut; cures ſore eyes; gives eyes to thoſe that have none to ſee it? In ſhort, which raiſes the deſire of being lighted by it, and gains even their love, who were afraid to ſee it? Every eye ſees it; nor would it ſee any thing, unleſs it ſaw it; ſince it is by that light, and its pure rays, that the eye ſees every thing. As the ſenſible ſun in the firmament lights all bodies, ſo the ſun of intelligence lights all minds. The ſubſtance of a man's eye is not the light: on the contrary, the eye borrows, every moment, the light from the rays of the ſun. Juſt in the ſame manner, my mind is not the primitive reaſon, or univerſal and immutable truth, but only the organ through which that original light paſſes, and which is lighted by it. There is a ſun of ſpirits that lights them far better than

than the viſible ſun lights bodies. This ſun of ſpirits gives us, at once, both its light, and the love of it, in order to ſeek it. That ſun of truth leaves no manner of darkneſs; and ſhines at the ſame time in the two hemiſpheres. It lights us as much by night as by day; nor does it ſpread its rays outwardly, but inhabits in every one of us. A man can never deprive another man of its beams. One ſees it equally, in whatever corner of the univerſe he may lurk. A man never needs ſay to another, "Step "aſide, to let me ſee that ſun: you rob "me of its rays: you take away my "ſhare of it." That ſun never ſets; nor ſuffers any cloud, but ſuch as are raiſed by our paſſions. It is a day without ſhadow. It lights the ſavages even in the deepeſt and darkeſt caves; none but ſore eyes wink againſt its light: nor is there indeed any man ſo diſtempered, and ſo blind, but who ſtill

walks by the glimpſe of ſome duſkiſh light conveyed to him from that inward ſun of the conſcience. That univerſal light diſcovers and repreſents all objects to our minds; nor can we judge of any thing, but by it; juſt as we cannot diſcern any body, but by the rays of the ſun.

Sect. LIX.

It is by the light of the primitive truth, that a man judges of the truth or falſehood of what is ſaid to him.

MEN may talk to us, with a view to our inſtruction; but we cannot believe them farther, than we find a certain conformity betwixt what they ſay, and what is dictated to us by the maſter within. After they have exhauſted all their arguments, we muſt ſtill appeal to this maſter, and liſten to him for a final deciſion. If a man ſhould tell us, that

that a part is equal to the whole, of which it is but a part, we could not forbear laughing; inſtead of perſuading us, he would become contemptible in our opinion. It is in the deep receſs of our own minds, by conſulting the maſter who reſides there, that we are to look for the truths, which others may attempt to teach us from without. To ſpeak properly, there is only one true maſter, who teaches all things, and without whom nothing can be learned. Other maſters refer us ſtill to this internal ſchool, where the one inſtructor ſpeaks alone; 'tis there we receive what we have not; 'tis there we learn what we knew not before, and recover what we had loſt in oblivion. It is in the intimate receſs of ourſelves that he keeps in ſtore for us certain truths, which lie as it were buried, till ſome occaſion calls them forth to life: and 'tis there, in a word, that we diveſt ourſelves of the

falſhood we had embraced. We are ſo far from judging this maſter, that his judgment abſolutely controuls us in all things. He is a diſintereſted judge, and hath full ſuperiority over us. We may, indeed, refuſe to liſten to him, and drown his voice in the tumult of our paſſions; but if we hear, we have no power to contradict him. Nothing is more unlike man than this inviſible maſter, who inſtructs him, and who judges him with ſo much rigour and perfect truth. Thus our limited, uncertain, defective reaſon, is only a feeble and momentary inſpiration of a primitive, ſupreme, and immutable reaſon, which communicates itſelf, in ſome degree, to all intelligent beings.

SECT. LX.

The ſuperior reaſon that reſides in man is GOD *himſelf; and whatſoever hath hitherto been diſcovered to be in man, are evident footſteps of the divinity.*

IT cannot be ſaid, that man gives himſelf the thoughts he did not poſſeſs: much leſs can it be ſaid, that he receives them from other men; ſince it is certain, that he neither does, nor can admit any thing from without, unleſs he finds it in the receſs of his own mind, by an inward conſultation with the principles of reaſon, an examination whether what he is told be agreeable, or repugnant to them. This inward ſchool therefore, in which a man acquires what he neither can give himſelf, nor obtain from other men, who, like him, live upon truſt, is real. Thus do I find within me two reaſons; one of which

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is myſelf, the other ſomewhat above me. That which is myſelf, is very imperfect, prejudiced, ſubject to error, changeable, head-ſtrong, ignorant, and limited; in ſhort, it poſſeſſes nothing but what it borrows. The other, tho' common to all men, is at the ſame time ſuperior to all men: it is perfect, eternal, immutable, ever ready to communicate itſelf in all places, and to rectify the miſtakes of all erroneous minds; in a word, it is incapable of being either exhauſted or divided, tho' it flows perpetually into every breaſt that is open to receive it. Where ſhall I look for that reaſon, which is ever ſo near me, and yet ſo diſtinct from me? Where does it reſide? That it muſt be ſomething real, is manifeſt, ſince that which does not exiſt can neither be perfect in itſelf, nor communicate perfection to imperfect natures. Where! O where is this ſupreme reaſon? Is it not the very GOD I am ſearching after?

SECT.

SECT. LXI.

Other ſenſible traces of the divinity in man, drawn from the knowledge which man has of unity.

I STILL find other footſteps of the divinity within me; and this is one which now ſtrikes me very ſenſibly.

I HAVE an idea of numbers, and their relations to one another, even to a prodigious quantity.

FROM whence did I derive this knowledge? It is ſo very diſtinct, that I cannot ſeriouſly doubt of my poſſeſſing it: if another man deviates from it in computation, I immediately correct him without diffidence. If he tells me that 17 and 3 make 22, I ſuddenly anſwer that 17 and 3 make but 20; and the

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ſame light, which reſides in him alſo, obliges him inſtantly to acquieſce in my correction. The ſame maſter, who ſpeaks in me to correct him, ſpeaks at the ſame time in him, and bids him acquieſce. They are not two maſters who conſent betwixt themſelves to make us agree. It is one indiviſible, eternal, immutable ſomething, which, at the ſame time, ſpeaks in us both with an irreſiſtible perſuaſion. Once more then: from whence have I this juſt notion of numbers? Numbers, in their utmoſt extent, are but a ſeries of repeated units: a certain ſum of theſe units, compounded together, makes every diſtinct numerical denomination. The number of two, for inſtance, conſiſts of two units; the number of four is reducible to one, repeated four times *. We cannot, therefore, conceive any number, without conceiving unity, which is the fundamental eſſence

* S. Aug. lib. ii. de Lib. Arb.

eſſence of every poſſible number; nor can we conceive any repetition of unity, without conceiving unity itſelf, which is the baſis of it.

BUT, by what means can I know any real unit? I never ſaw, I never imagined any by the medium of my ſenſes. For inſtance, let me take the moſt minute atom; it muſt have a figure, length, breadth, and depth; a top and a bottom; a right and a left ſide: and again, the top is not the bottom, nor is one ſide the other. Therefore, this atom is not truly one, ſince it conſiſts of parts. Now a compound is a real number, and a multitude of beings. It is not a real unit, but a collection of beings; one of which is not the other. It was not by my eyes, my ears, or my hands, therefore, nor even by my imagination, that I learned there is in nature any real unity: on the contrary,

contrary, whatever my ſenſes, or my imagination ever preſented to me, was a compound, a real number, or a multitude. Abſtracted unity continually flies me, and eſcapes me, as it were, by a kind of enchantment. Yet, ſince I look for it in ſo many diviſions of an atom, it is certain that I have a diſtinct idea of it; and it is only by this ſimple and clear idea, and the repetition of it, that I arrive at the knowledge of ſo many other numbers. At the ſame time it is evident, that ſince it eſcapes me in all the diviſions of natural bodies, I never came by the knowledge of it through the canal of my ſenſes or imagination. Here then is an idea within me, independent of the ſenſes, the imagination, and bodily impreſſions.

FARTHER, ſhould I even ſcruple to acknowledge that I have a clear idea of unity, which is the foundation of all numbers,

numbers, becauſes numbers are but repetitions or collections of units; I muſt be compelled, at leaſt, to confeſs, that I know a great many numbers, with their properties and relations. I know, for inſtance, how many 900000000, added to another ſum of 800000000, will make. In this I do not miſtake myſelf; in this I ſhould, with great certainty and readineſs, correct another man that fell into a miſtake. Yet it never was in the power of either my ſenſes, or my imagination, to repreſent to me diſtinctly all theſe millions added together. The picture or image, that would be repreſented to me, by either of theſe, would not be more like ſeventeen hundred millions, than it would be like a far inferior number. How was it then that I came by ſo diſtinct an idea of numbers, which I never could either perceive or imagine? Theſe ideas, independent upon bodies, can neither be cor-

poreal

poreal themſelves, nor received into a corporeal ſubject. They diſcover to me the nature of my ſoul, which admits and receives into itſelf what is incorporeal, in a manner that has no relation to body. But whence have I, of bodies themſelves, an idea ſo diſtinct from body? It cannot be by my own nature, which is incapable of ſuch diſtinction: that within me, which knows bodies, is itſelf incorporeal; ſince it knows them without receiving that knowledge thro' the canal of corporeal organs, ſuch as the ſenſes and imagination. That which thinks in me, muſt be, if I may uſe ſuch an expreſſion, a ſort of nothing of corporeal nature. How became I able to know beings, which by nature have no relation with my thinking eſſence? Some other being, ſuperior to thoſe two ſo very different natures, and which comprehends them both in its own infinity, muſt certainly have united them in my ſoul,

ſoul, and given me an idea of a nature entirely different from that which thinks within me.

SECT. LXII.

The idea of unity proves, that there are ſubſtances not material, and that there is a being perfectly one, who is GOD.

SOME one perhaps may ſay, with regard to units, it is in a ſpiritual, not a bodily manner, that I come to the knowledge of them; and therefore my mind being diſtinctly one, and truly known to me, it is from that, not from corporeal ſubſtance, that I have the idea of unity. But, to this I anſwer,

1. THAT there are material ſubſtances.

IT will follow, at leaſt, from thence, that I know ſubſtances which are preſent, and yet have no extenſion or diviſibility. Thus are we already come

to beings purely incorporeal, in the number of which I ought to place my ſoul. Who is it that has united this ſoul to my body? My ſoul is not an infinite being; it has not exiſted always, and its thoughts are now confined within certain limits. Who made it? Who enables it to know bodies ſo different from itſelf? Who gives it ſo great a command over one certain body, and reciprocally gives that body ſo powerful an empire over the ſoul? Moreover, how do I know whether this thinking ſoul be really one, or whether it hath parts? I do not ſee this ſoul. Will any man tell me, it is a thing ſo inviſible, and ſo impenetrable, that it ſhews me clearly what is unity? So far am I from learning by my ſoul what it is to be diſtinctly one, that, on the contrary, it is by the idea of unity I already have, that I examine whether my ſoul be one, or compoſed of parts.

2. THAT

2. THAT there is a being perfectly one, which is GOD alone.

ADD to this, that I have within me a clear idea of a perfect unity, an idea far above what I can find in my ſoul. She is often divided, as it were, betwixt two opinions, two contrary inclinations and habits; and of this diviſion ſhe is conſcious to herſelf. Does not this diviſion, which I find within my own breaſt, indicate ſomething like multiplicity and compoſition of parts? The ſoul has, beſides, what we may at leaſt call a ſucceſſive compoſition of thoughts, one of which is altogether different and diſtinct from another. Now I conceive an unity, which, if I may ſo ſpeak, is infinitely more one than this. I conceive a being who never changes his thoughts, who for ever thinks all things at once, and in whom no compoſition, not even that ariſing from ſucceſſion, can be found.

It is, undoubtedly, this idea of the perfect and ſupreme unity, that makes me ſo inquiſitive after ſomewhat of unity in ſpirits, and even in bodies. This idea, ever preſent in my own breaſt, is born with me: it is the perfect model which guides me in all my reſearches after ſome imperfect copy of itſelf. This idea of what by way of excellence is one, ſimple, and indiviſible, can be no other than the idea of GOD. I therefore know GOD with ſuch perſpicuous evidence, that it is by my knowledge of him that I ſeek in myſelf, and in all creatures, ſome image and reſemblance of his unity. All bodies have, as it were, ſome mark or impreſſion of that unity; and all ſpirits, though they have a ſucceſſive compoſition of thoughts, bear a ſtill nearer ſimilitude of it.

SECT.

SECT. LXIII.

The dependency and independency of man. His dependency proves the exiſtence of his creator.

BUT there is ſtill another myſtery, which I carry within me, and which renders me incomprehenſible to myſelf; viz. That on the one hand, I am free; and on the other, I am dependent. Let us examine theſe two contrarieties, and ſee whether it be poſſible to reconcile them.

I AM a dependent being. Independency is the ſupreme perfection. That which is by itſelf, muſt carry within itſelf the ſource and ſpring of its own being; or, which is the ſame thing, it muſt borrow or derive nothing from any other being different from itſelf. Suppoſe a being which collects in itſelf

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all the perfections you can conceive, but which, at the ſame time, has a borrowed and dependent exiſtence; you will ſtill find it to be leſs than another being, of which you have only the ſingle idea of bare independency. For there is no compariſon to be made betwixt a being that exiſts by itſelf, and a being which has nothing of its own, nothing but what it borrows; and which poſſeſſes itſelf, as it were, only upon truſt.

THIS conſideration diſcovers to me the imperfection of that which I call my ſoul. If ſhe exiſted by herſelf, ſhe would borrow nothing from any other; ſhe would not want either to have her ignorance enlightened, or her errors corrected. Nothing could reclaim her from her vices, or inſpire her with any virtue, or render her will better and more tractable than ſhe found it at firſt. This ſoul would for ever poſſeſs all that

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ſhe could ever be capable of enjoying; nor could ſhe ever receive any addition from without. It is no leſs certain, at the ſame time, that ſhe could not loſe any of her perfections; for what exiſts by itſelf, is always neceſſarily the whole of itſelf. My ſoul, therefore, could not lapſe into ignorance, error, or vice; nor could ſhe ſuffer any diminution of her volition to good. On the other hand, ſhe could neither inſtruct or correct herſelf; nor could ſhe become better than ſhe is. As things are, I experience the contrary of all that would be thus neceſſary, if my ſoul were ſelf-exiſtent. I forget, I miſtake, I wander aſtray; I loſe the ſight of truth, and the love of virtue; I am liable to corruption and diminution. On the other hand, I improve and augment by the acquiſition of wiſdom, and diſpoſition to virtue, which I had not before. This intimate experience convinces me, that

my ſoul is not a ſelf-exiſtent, independent being; a being neceſſary in itſelf, and immutable in regard to all that it poſſeſſes. Whence then proceeds that augmentation and improvement of myſelf? Who is it that can render my being more perfect, by making me better, and conſequently making me greater than I was before?

SECT. LXIV.

Volition to good can proceed only from a ſuperior being.

THE will, or capacity of willing, is doubtleſs a degree of exiſtence, and of goodneſs, or perfection. But good will, or volition to good, and deſire after it, is another degree of ſuperior good. For one may abuſe the faculty of willing, by willing that which is evil; as to deceive, hurt, or do injuſtice: whereas

whereas good will is the good or right uſe of the will itſelf, which cannot but be good. There is nothing therefore ſo precious in man, as this good will, benevolence, or volition to good. It is this which ſets a value upon all his other faculties. It is, as it were, "the whole man *," according to the words of the preacher.

WE have already ſeen, that my will does not exiſt by itſelf, ſince it is ſubject to loſe, and to receive degrees of good, or perfection. We have ſeen, that it is a good inferior to good will; becauſe it is better to will that which is good, than barely to have a will ſuſceptible both of good and evil. How is it poſſible to believe, that I, a weak, imperfect,

* "Hoc eſt enim omnis homo;" ſo the Vulgate renders thoſe words, Eccleſ. xii. 13. which, in our tranſlation, we read, "This is the whole duty of man."

fect, borrowed, and dependent being, can beſtow on myſelf the higheſt degree of perfection, while it is evident, that the inferior degree is derived to me from a firſt exiſtence? Can I imagine that God gives me the leſſer good, and that without him I give myſelf the greater? Where ſhould I obtain that high degree of perfection, in order to beſtow it on myſelf? Could I procure it from nothing, which is the whole of my own ſtock? Shall I ſay, that other ſpirits, equally imperfect with mine, communicate it unto me? But ſince thoſe limited and dependent beings cannot, any more than myſelf, give to themſelves any one thing; much leſs can they beſtow any thing on another. Not being ſelf-exiſtent, they have not of themſelves any true power, either over me, over thoſe things that are imperfect in me, or over themſelves. It is neceſſary therefore, without ſtaying to look at

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them, to aſcend higher, and find out a firſt, all-prolific, all-powerful cauſe, who is able to beſtow on my ſoul that good volition which ſhe has not in herſelf.

SECT. LXV.

A ſuperior eſſence being the cauſe of all the modifications of the creatures, it is impoſſible for the human will, unaſſiſted, to determine itſelf towards that which is good.

LET us here add another reflection. That firſt being is the cauſe of all the modifications of his creatures. The operation, to ſpeak in the language of the philoſophers, follows the exiſtence. A being in its own nature dependent, muſt be ſo in all its operations. That which is acceſſory, is a conſequence of the principal. The author of their eſſence, therefore, is alſo the author of all the

the modifications or modes of exiſtence in his creatures. Thus GOD is the real and immediate cauſe of all the configurations, combinations, and motions of all the bodies in the univerſe. He hath ſet one body in motion, and by means of that he gives motion to another. It is he who created all things, and whoſe power ſtill operates in all his works. Now volition is the modification of the will, juſt as motion is the modification of bodies. Shall we affirm, that GOD is the real, immediate, and entire cauſe of the motion of all bodies, and deny that he is equally the real and immediate cauſe which actuates the will to what is good? Shall this modification, the moſt excellent of all, be the only one not wrought by GOD in his own work? Shall the work beſtow this on itſelf, independently of its author? Who can entertain ſuch a thought? My volition to good, which I had not yeſterday,

yeſterday, and which I have to-day, is not therefore a thing which I beſtow on myſelf. It came from him who gave me the faculty of willing, and even my very exiſtence.

As volition is a greater perfection than bare exiſtence; ſo to will that which is good, is a greater perfection than ſimply to will. The conſequent operation of power, when it proceeds to a virtuous act, is the greateſt of all human perfections. Power is only a balance, a beam in equilibre betwixt virtue and vice, a mere ſuſpenſion betwixt good and evil. The progreſs or paſſage to the act, is a determination to the ſide of good, and conſequently to that good which is ſuperior. The power ſuſceptible of good and evil proceeds from GOD: this is what we have proved beyond all poſſibility of a doubt. Shall we now affirm, that the deciſive ſtroke, the

the operation that determines to the greater good, does not proceed from him, or proceeds leſs from him than the bare power? All that we have ſaid evidently concurs with thoſe words of the apoſtle, that "GOD works in us both to will and to do of his own good pleaſure*." Thus far we have traced the dependency of man. Let us now ſee wherein conſiſts his liberty.

SECT. LXVI.

Of human liberty.

I AM free. This is a truth of which I can have no doubt. I can either will, or not will: of this I feel within my breaſt the moſt intimate and invincible evidence. There is in me not only a power of choice betwixt willing and not willing, but alſo a choice betwixt divers

* Philip. ii. 13.

divers wills, with reſpect to the variety of objects that preſent themſelves. I am ſenſible, as the ſcripture ſays, that "I am in the hand of my council*." This alone ſuffices to ſhew me, that my ſoul is not corporeal. All that conſiſts of body, all corporeal ſubſtances, are in every thing determined by laws, which we call phyſical, or natural; laws that are neceſſary, invincible, and oppoſite to what we underſtand by liberty: they do not, in any ſenſe, determine themſelves. From thence I conclude, that my ſoul is of a nature entirely different from that of my body. But who is it, that was able to join, in ſuch a reciprocal union, two natures ſo different, and retain them in a concert ſo juſtly ſuited to all their reſpective operations? This bond, as we before obſerved, could be formed only by a ſuperior being, who compre-

* Eccleſ. xv. 14.

comprehends theſe two kinds of perfection in his own perfect infinity.

SECT. LXVII.

The will of man, when it determines, modifies itſelf; and in this conſiſts human liberty.

THAT modification of my ſoul, which we call volition, or will, is not of the ſame kind with the modifications of bodies. A body does not in any ſenſe modify itſelf: it is modified by the power of GOD alone. It does not move itſelf; but is moved. It acts not at all; but in every thing is actuated, or acted upon. Thus, GOD is the only real and immediate cauſe of the different modifications of bodies. But, with regard to ſpirits, the caſe is quite otherwiſe. My will determines itſelf; and ſince to determine, in this caſe, is

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in fact to modify, therefore my will modifies itſelf. GOD may prevent my ſoul, but he does not give it volition, in the ſame manner as he gives motion to bodies. If it be GOD who modifies me, I concur with him in the modification; and am therefore, in concert with him, a real cauſe of my own will. My will is ſo much my own, that the fault is only mine, if I will not what I ought. When I will a thing, it is in my power not to will it: I am maſter of this operation. And when I do not will it, it is becauſe I chuſe this negative rather than the affirmative, which is equally in my power. I neither am, nor can be, conſtrained in my will: for it is not poſſible, that I ſhould, in ſpite of myſelf, will that which I actually do will; ſince the volition, which I here ſuppoſe, evidently excludes all maner of conſtraint. And, beſides that I am exempt from all compulſion, I am alſo exempt from all ne-

ceſſity. I am conſcious to myſelf, that I have, if I may ſo ſpeak, a will with two edges, which can ſtrike on either ſide; or with two handles, which can chuſe either the yes, or the no; can turn itſelf either to this or to that object. My will itſelf is the only reaſon I know of my volition. I will a thing, becauſe my will leads me to that determination, and becauſe nothing is ſo much in my power, as either to will or to reject it. Admitting that the will were not conſtrained, yet, if it were neceſſitated, it would be as ſtrongly and irreſiſtibly determined from without to the act of volition, as bodies are to motion. Bodies and ſpirits would, in this caſe, be equally under another influence than their own; and the ſame invincible neceſſity, which determines thoſe to move, would determine theſe to will. Neither the one nor the other could be accountable for operations in which they had no power

of

of election. The will, it is true, might ſtill be ſaid to will that which it would: but ſo bodies likewiſe, when they move, actually have the motion which is impreſſed on them; and volition, in this caſe, would not differ from that motion. And if volition, like motion, be an effect of neceſſity, neither the one nor the other deſerves either praiſe or blame. A neceſſitated will, tho' we may call it a will unconſtrained, is yet ſuch a will as we cannot avoid having, and for which he that has it is not therefore accountable. Nor does foreknowledge confer true liberty on him that enjoys it: for he may have knowledge of a diverſity of objects, before he proceeds to volition, and yet have no real choice among thoſe objects. Deliberation itſelf is a ridiculous and cruel inſult on my infirmity, if, while I am balancing betwixt two opinions, I am actually unable, after all, to embrace the one, and under an abſolute

neceſſity to cloſe with the other. In a word, there is no true, no ſerious choice betwixt two objects, unleſs they both are ready before me, and ſo equally in my power, that I can either take or refuſe which of them I pleaſe.

SECT. LXVIII.

The human will may reſiſt the grace of GOD ; *and this liberty is the foundation of our merit, or demerit.*

BY ſaying that I am free, I mean therefore that my will is fully in my power, and that GOD himſelf leaves me at liberty to turn it which way I pleaſe ; that I am not determined, like other beings, but ſubject to my own determination. I conceive, that if that firſt being prevents me, by inſpiring me with a will to what is good, I ſtill have power to reject his actual inſpiration, how forcible

cible ſoever it may be; to fruſtrate its efforts, and refuſe my aſſent to the divine impulſe*. I conceive likewiſe, that when I reject the heavenly inſpiration towards what is good, I have the true and actual power not to reject it; juſt as I have the actual and immediate power to riſe when I am ſitting, and to ſhut my eyes when they are open. Objects, indeed, may tempt and allure me, by that which is agreeable in them, to will or deſire them. Reaſons, for turning my volition that way, may preſent themſelves to my mind with the utmoſt ſpirit and vivacity. The Supreme Being may alſo attract me, by his moſt perſuaſive inſpirations. But yet, amidſt all theſe allurements of objects, this vivacity of reaſons, and even this actual inſpiration of a Superior Being, I ſtill remain maſter of my will, and am free either to chuſe or to reject.

* Conc. Trid. ſeſſ. 6.

It is this exemption, not only from all conſtraint, but likewiſe from all neceſſity, this empire over my own actions, which renders me inexcuſable when I will that which is evil; and praiſeworthy, when I will that which is good. This is the foundation of human merit, or demerit. This conſtitutes the juſtice of either puniſhments or rewards. Among men, all exhortations, reprehenſions, promiſes, threatenings, take their riſe from this conſideration. All political inſtitutions, every kind of inſtruction, every rule for our moral conduct, have this for their baſis. In a word, all that regards human life, and the real character of human action, is reducible to the teſt of this ſingle truth: "that nothing is ſo much in the power "of our will, as our will itſelf; and "that we poſſeſs this free will, this de-"termining power, this faculty of chu-"ſing betwixt objects on both ſides, this

"election

" election betwixt two opinions or " counſels, which are both immediately " within our reach *." Of this power the ſhepherds and plowmen ſing in the fields; the merchants and artificers ſuppoſe it in their dealings; actors repreſent it on the ſtage; magiſtrates believe it in their deliberations and judgments; doctors teach it in their ſchools: no man of ſenſe, in ſhort, can ſeriouſly doubt the exiſtence of it. This truth, imprinted in the inmoſt receſs of our hearts, is always ſuppoſed in the practice of life, even by thoſe philoſophers who would endeavour to ſhake it by their vain ſpeculations. The intimate, ſelf-convicting evidence of this truth, is like that of the firſt principles, which wants no concurrent teſtimony; but ſerve themſelves as ſufficient proofs to other truths, which are leſs clear and manifeſt. But the queſtion that now

 occurs,

* AUG. lib. de duobus Animab.

occurs, is, how could the firſt being make a creature, which is thus the arbiter of its own actions?

SECT. LXIX.

A character of the Divinity, drawn from the dependence and independency of man.

LET us now join together theſe two truths, which are equally certain. I am dependent upon a firſt being, even in my own will; and nevertheleſs, I am free. What then is this dependent liberty? How is it poſſible we can comprehend a free will, which yet is given by a firſt being? I am free in my will, as GOD is in his. It is principally in this, that I am the likeneſs and image of GOD. What a greatneſs, bordering upon infinity, does this preſent to the imagination! This is, indeed, a ray of the Divinity itſelf. The power that I have over

over my will, is a kind of divine power; and yet I am but a bare image of that ſupreme Being, ſo abſolutely free and powerful.

THE image of the divine independency, is not really that independency which it only repreſents. My liberty is but a ſhadow of the liberty of the firſt being, by whom I exiſt, and by whom I act. On the one hand, the power I have of willing what is evil, is not ſo much a true power, as a weakneſs and frailty inſeparable from my will: for it is only a power to fall, to degrade myſelf, and to diminiſh my degree of perfection and exiſtence. On the other hand, the power I have to will what is good, is not an abſolute power, ſince I have it not of myſelf. Therefore, as liberty is nothing more than power, a borrowed power can conſtitute only a borrowed and dependent liberty. A being ſo imperfect,

and

and ſo little his own, cannot be otherwiſe than dependent. But how then is he free? How profound is this myſtery! His liberty, of which I cannot doubt, demonſtrates his perfection: his dependence ſhews the origin of his exiſtence produced by Omnipotence from nothing.

Sect. LXX.

The ſeal and ſtamp of the Deity in his works.

WE have been ſurveying the footſteps of the Divinity, or rather the ſeal and ſtamp of God himſelf, on all that is called the works of nature. When we avoid metaphyſical ſubtilties, we obſerve, with the firſt glance of the eye, a hand that is the firſt mover in all the parts of the univerſe. The heavens, the earth, the ſtars, vegetables, animals, our own bodies, and our minds; every thing preſents to us an order, a juſtly proportioned

tioned meaſure, an art, a wiſdom, a ſpirit ſuperior to us, which appears as the ſoul of the whole world, and which conducts all things to its own ends, with a force which is at once omnipotent, and yet gentle and inſenſible. We have ſeen, to ſpeak familiarly, the architecture and frame of the univerſe, and the juſt proportion of all its parts: a ſingle glance hath all along ſufficed us to diſcover in a ſmall animal, even in an ant, more than we can find in the ſun; a wiſdom and power delighting to ſhew itſelf in forming and finiſhing the meaneſt of its works. Thus much is immediately obvious, without any ſpeculative diſcuſſion, to the moſt ignorant of mankind. But what a world of other wonders ſhould we diſcover, were we to penetrate into the ſecrets of natural bodies; were we to diſſect the internal part of animals, and trace that moſt perfect mechaniſm which is there diſcernible?

SECT.

SECT. LXXI.

An objection of the Epicureans, who aſcribe every thing to chance.

METHINKS I hear certain philoſophers, who tell me in anſwer, that all this harangue on the art which ſhines forth in nature, is nothing but a continued ſeries of ſophiſtry. "It is true, "ſay they, that all nature is for man's "uſe: but it is a falſe inference, which "you draw from thence, that it is the "work of art, and was made on pur-"poſe for man. He that can thus find "what he looks for, though it never "exiſted, muſt have a moſt ingenious "art in deceiving himſelf. The induſtry "of man, they will add, does indeed "make uſe of an infinite number of "things which nature exhibits to him, "and which he finds convenient for his

"purpoſe;

" purpoſe; but nature did not make
" thoſe things expreſly for his uſe and
" conveniency. For example, there are
" ſome country-fellows who daily climb
" up, by means of ſome points and
" irregularities they find in the rocks,
" to the top of a high mountain;
" but it does not from thence follow,
" that thoſe points and irregularities
" were cut with art, like a ſtair-caſe,
" for the commodity of ſuch men. In
" like manner, when a man happens
" to be in a field during a ſtorm, and,
" by good luck, meets with a cave,
" he makes uſe of it, as he would of
" a houſe, for ſhelter; but it is not
" for this reaſon true, that the cave
" was made on purpoſe to ſerve the
" man for a houſe. It is the ſame
" thing with reſpect to the whole world.
" It was formed by chance, and with-
" out deſign: but men, finding it ſuch
" as it is, had the invention and addreſs

" to

" to adapt it to their own uſes. Thus " the art, which you admire, both in " the work and him that made it, is " really in man only, who knows how, " when he ſees things ready, to make " his own advantage of what he finds " around him." This is doubtleſs the ſtrongeſt objection which thoſe philoſophers can raiſe; and they will not, I hope, have any reaſon to complain, that I have weakened it in the repreſentation. But it requires only to be more cloſely examined, in order to ſhew how very weak it is in itſelf. This will appear from the bare repetition of what I have before ſaid upon this ſubject.

SECT. LXXII.

An anſwer to the objection of the Epicureans, who aſcribe all to chance.

WHAT would one ſay of a man who ſhould applaud himſelf upon the ſubtilty of his philoſophy, and yet ſhould maintain, upon his coming into a houſe, that it was made by chance; and that art and induſtry had no concern in rendering it commodious to man? The reaſon he muſt give for what he affirmed, could be only this: that ſince there are caves, ſomewhat like that houſe, which were not dug by man, therefore this houſe, as well as the caves, muſt be the work of chance. To ſuch a reaſoner one would ſhew all the parts of the houſe, and diſcourſe on them to this effect: "Do you ſee, ſir, this great "court-gate? It is larger than any door "of

" of the houſe, that coaches may be
" admitted through it. The court itſelf
" is ſpacious enough for the coaches to
" turn in, that they may go out of it
" again. The ſteps of this ſtair-caſe
" are low and equal, that you may aſ-
" cend it without labour. You are con-
" ducted by it to the ſeveral ſtories and
" apartments of which the houſe con-
" ſiſts. The windows, opened at cer-
" tain regular diſtances, enlighten the
" whole building. They are glazed, you
" ſee, that the wind may not enter to-
" gether with the light ; but they can
" be opened at pleaſure, when the wea-
" ther is fair, to let in as much freſh
" air as you deſire. The roof is con-
" trived to defend the whole building
" from the injuries of the weather. The
" rafters are made ſloping, and terminate
" in a ridge, that the rain and ſnow
" may eaſily run off on both ſides. The
" tiles are laid one over another, that

" they

" they may entirely cover the timber-
" work. The ſeveral floors make ſo
" many ſtories, by which means a great
" number of rooms are formed over a
" ſmall ſpace of ground. The chim-
" nies are contrived to make fires in,
" when the weather is cold, without
" burning the houſe; and to let out the
" ſmoke, that it may not offend thoſe
" who are warming themſelves. The
" apartments are diſtributed in ſuch a
" manner, that one does not incommode
" another; that the ſeveral perſons of a
" numerous family may lodge ſeparately,
" and not go through the chambers of
" each other; and that the maſter's
" apartment is the principal, and moſt
" commodious of all. There are kitch-
" ings, offices, ſtables, and coach-
" houſes. The rooms are furniſhed
" with beds to lie on, chairs to ſit on,
" and tables to write and eat on. Sure,
" ſir, (one would ſay to ſuch a philoſo-

" pher) this work muſt have been con-
" ducted by ſome able architect; for
" every thing in it is agreeable, de-
" lightful, juſtly proportioned, and con-
" venient. He muſt, beſides, have had
" ſkilful artiſts to work under him.—
" Not, in the leaſt, (our philoſopher
" would anſwer) you are very ingenious
" in deceiving yourſelf. The houſe, it is
" true, is, as you ſay, agreeable, plea-
" ſant, regular, and commodious; but
" yet this houſe made itſelf, with all its
" apartments and proportions. It was
" chance that put together all the ſtones
" in that fine order: chance raiſed the
" walls, framed and laid the timber-
" work, opened the windows at due
" diſtances, and placed the ſtair-caſe as
" it ſtands. Do not credulouſly perſuade
" yourſelf that any human hand had the
" leaſt concern in the whole affair.
" Men have only availed themſelves of
" a work that they found ready made,

" and

" and converted it to their own uſe. " They fondly fancy it was made for " them, becauſe they obſerve in it things " that they know how to turn to their " own conveniency; but all that they " aſcribe to the deſign of an imaginary " architect, is mere invention, a con- " ceit come into their heads ſince the " work was done. This houſe, regu- " lar as it appears, well proportioned as " all the parts of it are found, was made " juſt in the ſame manner as a rude cave; " and men finding it as it is, and per- " ceiving it would anſwer their purpoſe, " only make uſe of it for their occaſions, " as they would of a cave, which they " ſhould find in a rock, in the midſt of " a ſolitary deſart, during all the terrors " of a dreadful ſtorm."

WHAT could one think of ſuch a whimſical philoſopher, if he ſhould perſiſt ſeriouſly in this doctrine, and aſſert,

that there is no appearance of art in ſuch a houſe? When we read the fable of Amphion, who, by a miraculous effect of harmony, cauſed the ſtones to riſe, and dance into order and ſymmetry one over another, till they had formed the walls of Thebes, we cannot forbear laughing at the poetical fiction: but this very fiction is nothing near ſo incredible, as that which our philoſopher takes upon him to defend. Imagination, at leaſt, might form ſuch an idea of harmony, which conſiſts in a local motion of certain bodies, as that, by ſome of thoſe ſecret powers in nature, which are admired without being underſtood, it ſhould actuate the ſtones with a kind of order and cadence, ſo as to occaſion ſomewhat of regularity in the building. We muſt own, indeed, that this explanation is ſhocking to reaſon, which by no means can embrace it: but yet, it is leſs extravagant, after all, than that which I have

have put into the mouth of our pretended philoſopher. Can any thing be more abſurd than the conceit of ſtones that hew themſelves; that of their own voluntary motion iſſue out of the quarry; that ariſe and place themſelves one upon another, without leaving any vacuity betwixt; that carry with them mortar, for their own cement; that diſpoſe themſelves in ſuch manner, as to form regular and diſtinct apartments; and, finally, that admit a frame of timber-work upon them, and tiles over that, in order to cover the whole ſtructure? The very children, who cannot yet ſpeak plain, would laugh us to ſcorn, were we to propoſe to them ſuch a ridiculous fable as the object of their belief.

SECT. LXXIII.

Compariſon of the world with a regular houſe. Sequel of the anſwer to the Epicurean objection.

IS there leſs room to laugh at him, who ſays the world made itſelf, than at him who affirms the ſame thing of our fabulous houſe? The point is, not to compare the world with a rude cavern, void of regular form, which may be ſuppoſed to be made by chance: our buſineſs is to compare it with a houſe, in which the moſt perfect architecture ſhines forth conſpicuouſly. The ſtructure of the ſmalleſt animal is infinitely more artful, more admirable, than that of the moſt beautiful houſe that ever was built.

SUPPOSE a traveller entering Saïd, or Upper Egypt, the country where the antient

antient Thebes, with its hundred gates, once ſtood, but which is now a deſart. Upon ſeeing the columns, pyramids, obeliſks, and inſcriptions in unknown characters, which he might find there, would he immediately ſay, This place was never inhabited by men; no human hand had any thing to do in all this; it was chance that formed theſe columns, that erected them on their pedeſtals, and crowned them with capitals ſo juſtly proportioned to their height; it was chance that ſo firmly joined together the pieces which compoſe thoſe pyramids; it was chance that cut the obeliſks out of a ſingle ſtone each, and engraved on them all thoſe characters? Would he not, on the contrary, ſay, with all the confidence that human certainty, built on the ſtrongeſt evidence, can give, Theſe magnificent ruins are the remains of a moſt majeſtic kind of architecture, which flouriſhed in antient

Egypt? This is what plain reaſon would ſuggeſt, at the firſt glance of the eye, without entering into the leaſt deduction of arguments. It is juſt the ſame thing with regard to the univerſe, upon the ſlighteſt proſpect we can take of it. A man may puzzle himſelf by vain ſyllogiſms, and induſtriouſly confound and obſcure the cleareſt notions in his own breaſt; but a ſingle glance of the eye, in this caſe, is deciſive. Such a work as the world is, never did, never can create itſelf. The bones, the tendons, the veins, the arteries, the nerves and muſcles that compoſe the human body, have together and ſeverally more art and proportion in their formation, than all the architecture of the antient Greeks and Romans. The eye of the moſt minute animal ſurpaſſes infinitely all the mechaniſm of all the moſt curious artiſts united. If a man were to find a watch in the ſands of Africa, would

would any one have the aſſurance to ſay, it was formed by chance in that dreary deſart? And yet there are men, who do not bluſh to affirm, that the bodies of animals, in compariſon with which the moſt exquiſite watch is void of art, are the wild effects of nothing but a blind capricious chance.

SECT. LXXIV.

Another objection of the Epicureans, drawn from the eternal motion of atoms.

I KNOW there is another objection which the Epicureans may draw from their own method of arguing. "The "atoms, or particles of matter, they "will ſay, have an eternal motion. "Their fortuitous concurrence, in that "eternity, muſt already have produced "infinite combinations. He that ſays "infinite, uſes a word that comprehends "all,

" all, without exception. Among theſe
" infinite combinations of atoms, which
" have already ſucceſſively happened, all
" ſuch as are poſſible, therefore, muſt of
" neceſſity be found: for if there were
" but one poſſible combination, which
" had not taken place in this infinite, it
" would ceaſe to be a true infinite; be-
" cauſe ſomething might be added to it;
" and becauſe whatever may be aug-
" mented, if limited on the ſide that is
" ſuſceptible of augmentation, is not
" truly infinite. Hence it follows, that
" the combination of atoms, which con-
" ſtitutes the preſent ſyſtem of the
" world, is one of thoſe combinations
" that have happened in this courſe of
" ſucceſſion. This being eſtabliſhed as
" a principle, need we to wonder at the
" exiſtence of the world in its preſent
" ſtate? It was neceſſary it ſhould take
" this very form, ſooner or later, that
" it now has: for, among thoſe infinite

" changes,

" changes, it muſt, at ſome time or ano-
" ther, fall on this very combination,
" which makes it now appear ſo regular;
" ſince it muſt have had, by turns, all
" combinations that are poſſible, and can
" be conceived. All ſyſtems are compre-
" hended in the total of eternity, and
" every one of them, ſooner or later,
" muſt reſult from the particular concur-
" rence of atoms productive of it. Na-
" ture preſents an infinite variety of
" new ſpectacles; and among them this,
" which we now ſee, and in which we
" actually are, came forth in its turn and
" order. The concourſe and motion of
" atoms, which thus made, will, in time,
" unmake it; in order to form innume-
" rable others, and of all poſſible kinds.
" This ſyſtem unavoidably found its
" place, ſince not this only, but all
" others, without exception, muſt have
" theirs in turn. It is in vain to look
" for a chimerical art in ſuch a work

" as

" as this, which chance could not fail
" of producing juſt as it is.

" ONE example will ſuffice to illuſtrate
" this. I ſuppoſe an infinite number
" of combinations of the letters of
" the alphabet, formed ſucceſſively by
" chance. Doubtleſs, all poſſible com-
" binations are comprehended in that
" total, which is truly infinite. Since
" it is certain, therefore, that the Iliad
" of Homer is nothing but a combina-
" tion of letters; it follows, that Ho-
" mer's Iliad is comprehended in that
" infinity of combinations, made by the
" characters of the Alphabet. This
" being once admitted, the man who
" pretends to diſcover art in the Iliad,
" muſt be a very bad reaſoner. He may
" extol, as much as he thinks fit, the
" harmony of the verſification, the
" propriety and magnificence of the
" expreſſions, the natural ſimplicity of

" the

" the images, the due proportion of
" parts, the perfect unity and inimitable
" conduct that ſtrike him throughout
" the poem. He may aver, that chance
" can never produce any thing ſo per-
" fect; and that nothing leſs than the
" utmoſt effort of human genius, as it
" appears in the moſt extraordinary men,
" is ſufficient to give the finiſhing hand
" to ſo excellent a performance. But his
" triumph is utterly vain and ground-
" leſs, ſince the reaſon it is founded on
" is evidently falſe. It is certain, at the
" ſame time, that chance, or the for-
" tuitous concourſe of characters, being
" aſſembled and mingled together in all
" the poſſible poſitions of an infinite
" variety, muſt in one of thoſe poſitions,
" or collocations, form that very and
" preciſe conbination which makes the
" Iliad. Whether this happen ſooner or
" later, it neceſſarily comes at one time
" or other: and thus the whole Iliad is

" perfectly

" as this, which chance could not fail
" of producing juſt as it is.

" ONE example will ſuffice to illuſtrate
" this. I ſuppoſe an infinite number
" of combinations of the letters of
" the alphabet, formed ſucceſſively by
" chance. Doubtleſs, all poſſible com-
" binations are comprehended in that
" total, which is truly infinite. Since
" it is certain, therefore, that the Iliad
" of Homer is nothing but a combina-
" tion of letters; it follows, that Ho-
" mer's Iliad is comprehended in that
" infinity of combinations, made by the
" characters of the Alphabet. This
" being once admitted, the man who
" pretends to diſcover art in the Iliad,
" muſt be a very bad reaſoner. He may
" extol, as much as he thinks fit, the
" harmony of the verſification, the
" propriety and magnificence of the
" expreſſions, the natural ſimplicity of

" the

" the images, the due proportion of
" parts, the perfect unity and inimitable
" conduct that ſtrike him throughout
" the poem. He may aver, that chance
" can never produce any thing ſo per-
" fect; and that nothing leſs than the
" utmoſt effort of human genius, as it
" appears in the moſt extraordinary men,
" is ſufficient to give the finiſhing hand
" to ſo excellent a performance. But his
" triumph is utterly vain and ground-
" leſs, ſince the reaſon it is founded on
" is evidently falſe. It is certain, at the
" ſame time, that chance, or the for-
" tuitous concourſe of characters, being
" aſſembled and mingled together in all
" the poſſible poſitions of an infinite
" variety, muſt in one of thoſe poſitions,
" or collocations, form that very and
" preciſe conbination which makes the
" Iliad. Whether this happen ſooner or
" later, it neceſſarily comes at one time
" or other: and thus the whole Iliad is

" perfectly

" perfectly compoſed, without the inter-
" poſition of human art." I have fairly ſtated this objection, without weakening it in any one particular. All that I now deſire, is, that the reader will give a ſerious and uninterrupted attention to the anſwers I am going to make.

SECT. LXXV.

The objection of the Epicureans, drawn from the eternal motion of atoms, fully anſwered.

NOTHING is more abſurd than to talk of the ſucceſſive combinations of atoms, which are infinite in number. Infinity can never be either ſucceſſive, or diviſible. For inſtance, propoſe to me any number, which you preſume to be infinite; and I ſhall always have two ways to demonſtrate, that it is not a true infinite. Firſt, I can ſubſtract an unit

unit from it: this will make it leſs than it was, and conſequently prove it to be finite. For whatever is leſs than infinite, has a boundary at the point where we ſtop, beyond which we might proceed by a deeper reſearch. Now the number which appears to be finite, when we ſubſtract from it a ſingle unit, could not be infinite before that ſubſtraction was made. A ſingle unit is certainly finite; and one finite, added to another finite, cannot make an infinite. If a ſingle unit, added to a finite, would conſtitute an infinite, the conſequence muſt be, that the finite would be almoſt equal to the infinite; which is the very quinteſſence of abſurdity. Secondly, I can add an unit to the given numbers, and conſequently augment it. Now that which may be augmented, cannot be infinite: for infinity can have no bound; and that which is capable of augmentation, is bounded on the ſide where

where the calculator ſtops, when he might proceed farther, and ſtill add unity to his number. It is evident then, that no diviſible compound can be the true infinite.

THIS foundation being once laid, all the romance of the Epicurean philoſophy diſappears in a moment. It is impoſſible there can be any diviſible body, which is truly infinite in extent; or any ſucceſſion of numbers, which is truly an infinite number. And, from hence it follows, that there never can be ſuch a ſucceſſive number of combinations of atoms, as amounts to infinity. If this chimerical infinite were indeed real, I acknowledge that all poſſible and conceivable combinations of atoms would be included in it; and conſequently, that all thoſe combinations, which ſeem to require the utmoſt art and induſtry, would of courſe be comprehended in it likewiſe.

likewiſe. If this were the caſe, the moſt wonderful performances of art might boldly be aſcribed to mere hazard or chance. He who ſaw palaces built according to the moſt perfect rules of architecture, the moſt curious furniture, watches, clocks, or machines, the moſt nice and variouſly compounded, in the midſt of a deſert iſland, would have no juſt room to conclude, that there had been men in that iſland, and that thoſe exquiſite works were performed by them. On the contrary, it would become him better to ſay, Perhaps one of thoſe infinite combinations of atoms, which have been ſucceſſively made by chance, accidentally produced all theſe compoſitions in this deſert iſland, without the leaſt aſſiſtance of human induſtry. Such an aſſertion as this, would be a very juſt conſequence, drawn from the principles of the Epicureans. But the manifeſt abſurdity of

this conſequence, is ſufficient to prove the abſurdity of the principles they endeavour to eſtabliſh. When men, by the natural rectitude of their common ſenſe, conclude that ſuch ſort of works cannot reſult from chance, they evidently ſuppoſe, though in a confuſed and indiſtinct manner, that atoms are not eternal; and that they never had, nor can have, an infinite ſucceſſion of combinations in their fortuitous mixture and jumble. For if this principle were once admitted, it would be impoſſible ever to diſtinguiſh the works of art from the works of chance; that is, from the productions of thoſe fortuitous combinations, which are altogether as independent on art, as the produce of a caſt with a number of dice.

SECT. LXXVI.

The Epicureans confound the works of art with thoſe of nature.

SINCE all men naturally ſuppoſe a ſenſible difference betwixt the works of art, and thoſe of chance; they conſequently ſuppoſe, though without examination, that the combinations of atoms have not been infinite; and this ſuppoſition is extremely juſt. That infinite ſucceſſion of combinations in atomic bodies, is, as I have already ſhewn, a more abſurd chimera in itſelf, than all the abſurdities which thoſe who adopt that falſe principle, would explain by it. No number, either ſucceſſive or continual, can be infinite: from whence it follows, that atoms cannot be infinite in number; that the ſucceſſion of their various motions, and combinations, can-

not be infinite; that the world cannot have been from eternity; and that ſome preciſe and determinate beginning of theſe ſucceſſive combinations muſt be found. A firſt individual, in the generations of every kind, muſt be admitted. The firſt form, that originally belonged to every particle of matter, muſt be inveſtigated. And as the ſucceſſive changes of that matter, muſt be limited in number, we muſt not admit, in thoſe changes, any other combinations, than ſuch as chance ordinarily produces: unleſs we acknowledge a ſupreme wiſdom, who, with the moſt perfect art, created all thoſe wonderful works which chance could never have produced.

SECT.

SECT. LXXVII.

The Epicureans take for granted whatever they pleaſe, without recurring to evidence.

THE Epicurean ſyſtem is ſo very weak, that the philoſophers who profeſs it can never bring it into any form, or make it paſs with the leaſt ſhadow of plauſibility, if we do not grant them, without proof, all their moſt fabulous poſitions. Their very firſt poſtulatum, that atoms are eternal, is a mere begging the queſtion: for, whence do they learn, that atoms did always exiſt, or are ſelf-exiſtent? To be ſelf-exiſtent, is the ſupreme perfection: and what authority have they to ſuppoſe, without evidence, that atoms have, in themſelves, a perfect, eternal, and immutable exiſtence? Do they find this perfection in the idea they have of every atom in

particular? One atom not being the ſame with, but abſolutely diſtinct from, another, each of them muſt have in itſelf, without reſpect to any other being, both eternity and independency. Repeat the queſtion: Is it in their idea of each atom, that theſe philoſophers find this perfection? Let us then, for once, grant them all that they demand in this queſtion, and even more than it becomes them to demand: let us ſuppoſe, that atoms are eternal, ſelf-exiſtent, independent of all other beings, and, of conſequence, entirely perfect.

SECT. LXXVIII.

The ſuppoſitions of the Epicureans are falſe and chimerical.

HAVING granted thus much, muſt we farther ſuppoſe, that atoms have motion of and from themſelves? Shall we,

we, merely for diverſion, admit this too, in order to give an air of reality to a ſyſtem more chimerical than the tales of the fairies? Let us conſult that idea of body, which we find in ourſelves. We have a perfect conception of it, without adding the idea of motion. We repreſent it to ourſelves as in a ſtate of reſt; and our idea of it, in that ſtate, with all its parts, its figures, and its dimenſions, is not leſs clear than when we conceive it to move. Vain is the ſuppoſition, that all bodies are perpetually in ſome motion, either ſenſible or inſenſible; and that though ſome parts of matter have leſs of this motion than others, yet the univerſal maſs of matter, at leaſt, has for ever the ſame motion conſidered in its totality. Talking at this rate, is talking to the wind; and requiring belief to all our wild imaginations: for, where do we learn that this law of matter moves continually in the whole

of it? Who has arrived at the knowledge of this by experience? Have they the confidence to beſtow the name of philoſophy on a raſh fiction, which takes for granted things that can never be verified? Is it ſufficient to elude the moſt ſimple and conſtant truths, that a man takes upon him to ſuppoſe, whatever his fancy coins? Have they any authority to conclude that all bodies move, either perceptibly or imperceptibly, without intermiſſion? When I ſee a ſtone that ſeems motionleſs, how will they demonſtrate to me, that every atom in that ſtone is actually in motion? Will they never give me convincing teſtimonies, but require me always to eſpouſe bare ſuppoſitions, without the leaſt appearance of truth?

SECT.

SECT. LXXIX.

It is a falſe poſition, that motion is eſſential to bodies.

LET us, however, proceed yet farther. Let us ſuppoſe, in mere complaiſance, that all the bodies in nature do always actually move: does it follow from thence, that motion is eſſential to every particle of matter? Beſides, if all bodies have not an equal degree of velocity, but ſome move more ſenſibly and more rapidly than others; if the ſame body may at ſome times move more ſwiftly, and at others more ſlowly; if a body that moves, communicates its motion to the body next in contact, which before was at reſt, or had ſuch an inferior degree of motion that it was inſenſible; we are obliged to confeſs, that a manner of exiſtence, which at one time augments,

at

at another decreaſes, in the bodies that have it, is not eſſential to them. That which is eſſential to a being, is always the ſame in that being. The motion which varies in bodies, and which, after having ſenſibly increaſed, ſlackens and abates, till it appears abſolutely annihilated; the motion which is loſt, which is communicated, which paſſes from one body to another as ſomething extraneous to it, cannot pertain to the eſſence of bodies. I ought to conclude, therefore, that bodies are perfect in their eſſence, though no motions be aſcribed to them. If motion be not in their eſſence, they have it only by accident; and if they have it only by accident, we muſt purſue our reſearches to the true cauſe of that accident. It is neceſſary, that bodies ſhould either beſtow motion on themſelves, or receive it from ſome other being. It is evident, that they do not beſtow it on themſelves, ſince no being

can

can give that to, which it has not in, itſelf. Our eyes convince us, that a body at reſt, continues ever motionleſs, if ſome other neighbouring body does not give it an impulſe. It is therefore certain, that no body moves of itſelf, and that one body is moved only by the motion of another communicated to it. But how comes it to paſs, that one body can communicate motion to another? Whence proceeds it, that one ball, which is made to roll on a ſmooth table, cannot touch another without moving it? Why was it not poſſible that motion ſhould exiſt, and yet not be communicable from one body to another? If that were the caſe, a ball in motion would immediately ſtop at the firſt contact with another, yet never ſhake or ſtir it.

SECT.

SECT. LXXX.

The rules of motion, which the Epicureans ſuppoſe to exiſt, do not render it eſſential to bodies.

I Foreſee the anſwer that will here be made. It is, that the laws of motion among bodies render it neceſſary, that one ſhould communicate it to another. But where are thoſe laws of motion written? Who was it that made them, and rendered them ſo inviolable? They are not eſſential to bodies: for we can conceive bodies at reſt; and we have even a conception of bodies, which would not thus communicate their motion, if the ſaid laws, the ſources of which are unknown to us, did not ſubject them to it. Whence proceeds this ſcheme of policy, a ſcheme that we may call arbitrary, which thus governs the motion of all

all bodies? Whence proceed thoſe laws ſo ingenious, ſo juſt, ſo reciprocally adapted to each other, that the leaſt deviation from them would at once deſtroy all that beautiful order, which we admire in the univerſe? One body being entirely diſtinct from another, it is by nature, in all reſpects, abſolutely independent of it. Whence it follows, that one body ought to receive nothing from another, nor to be ſuſceptible of any of its impreſſions. The modifications of one body imply no neceſſity for the modification of another in the ſame manner; that other being, in its exiſtence, entirely independent of the firſt. It is in vain to alledge, that the moſt ſolid and weighty maſſes bear away with them thoſe that are leſs groſs and ſolid; and that, in conſequence of this rule, a large leaden ball ought to move a ball of ivory. It is not the fact that we are diſcourſing of, but the cauſe why that

fact

fact happens. The fact is conſtant and uniform; the cauſe, therefore, ought to be equally certain and preciſe. Let us ſearch for it without prepoſſeſſion, and with an abſolute diſtruſt of all our own prejudices. What, I ſay, is the reaſon, that a great body bears off a little one? Quite the reverſe of this might as naturally happen for any thing we know of nature. The fact might as well be, that the moſt ſolid body ſhould not give motion to another; or, in other words, that motion ſhould be incommunicable. To infer, that nature ought to act as it does, is a prejudice contracted only by cuſtom.

SECT.

SECT. LXXXI.

We muſt have recourſe to a firſt mover, if we would give a ſatisfactory account of motion.

WE have ſeen, moreover, that matter can neither be infinite, nor eternal. It is neceſſary then, that there muſt be a firſt atom, by which motion began at a certain inſtant of time; and a firſt concurrence of atoms, which formed the firſt combination. This being proved, I aſk, who was the mover that gave motion to the firſt atom, and firſt ſet the machine of the univerſe a going? It is not poſſible to elude this queſtion, which comes ſo home to the point, by talking of an endleſs circle. That circle, being circumſcribed within finite bounds, hath plainly ſome certain limit. We muſt, therefore, find out the firſt atom that moved,

moved, and the firſt moment of this firſt motion, together with the firſt mover, whoſe hand gave that firſt impulſe.

SECT. LXXXII.

No law of motion hath its foundation in the eſſence of bodies; and moſt of thoſe laws are merely arbitrary.

AMONG the laws of motion, we muſt look upon all thoſe, which we cannot account for by the eſſence itſelf of bodies, as merely arbitrary. We have already demonſtrated, that no motion is eſſential to any body. All thoſe laws, therefore, which are looked upon as eternal and immutable, are, on the contrary, arbitrary, accidental, and inſtituted without neceſſity: for we cannot find the reaſon of any one of them in the eſſence of bodies.

DOUBTLESS,

DOUBTLESS, if there were any law of motion eſſential to bodies, it would be that by which bodies of leſs magnitude, and leſs ſolidity, are moved by ſuch as are more bulky and ſolid: and yet we have ſhewn, that even that law is not to be accounted for by the eſſence of bodies. There is another of thoſe laws, which might alſo appear very natural: I mean that, by which bodies always move in a direct, rather than a curve line, unleſs their motion be otherwiſe determined by the contact or influence of other bodies. But neither has this rule, any more than the former, any foundation in the eſſence of matter. Motion is in itſelf ſo accidental, ſuch a ſuperaddition to the nature of bodies, that this nature of bodies doth not diſcover to us any primitive or immutable law, by which they ought to move at all; much leſs, that they ought to move according to certain rules. Like as bo-

dies might have exiſted, and yet never have moved, or communicated motion to others; ſo might they never have moved but in a circular line; and that circular motion might have been as natural to them, as motion in a direct line. Who then is it, that has made a choice betwixt theſe two laws, which were both equally poſſible? That which is not determined by the eſſence of bodies, can have been determined only by him, who gave to bodies motion itſelf, which is no part of their eſſence. We may add, that this rectilinear motion might have been upwards or downwards, from right to left, or from left to right, or even in a diagonal line. Let them tell me who it was, that determined which way the direct line ſhould tend?

SECT.

SECT. LXXXIII.

If we ſhould even grant all the ſuppoſitions of the Epicureans, they can draw no conſequence from them.

LET us not be weary of the chace, but follow theſe Epicureans thro' the wildeſt of their ſuppoſitions: let us carry on the fiction to the utmoſt exceſs of complaiſance, and even admit, that motion is eſſential to bodies: let us ſuppoſe, as they do, that this motion, eſſential to bodies, is alſo eſſentially in a right line. Let us beſtow on atoms both an underſtanding and a will; as the poets formerly gave them to rocks and rivers. Let us farther allow them to chuſe from what point they will begin their right line. What advantage, at laſt, will our philoſophers draw from all theſe conceſſions, which contradict all

evidence? It will be neceſſary, in the firſt place, that all the atoms muſt have been in motion from all eternity. Secondly, that they muſt all have moved with equal velocity. Thirdly, that they muſt all have moved in a right line. And, fourthly, that they muſt have done all this, in conſequence of an immutable and eſſential law.

I AM willing to condeſcend farther, and ſuppoſe, of mere indulgence, that thoſe atoms are of different figures: for I will ſuffer our adverſaries to take for granted all that is incumbent on them to prove, ſince they have not ſo much as the ſhadow of a proof for any one part of their doctrine. A man can never make too many conceſſions to ſuch perſons, who cannot draw any one conſequence from all that is granted them: for the more abſurdities are allowed them, the ſooner are they enſnared by their own principles.

SECT.

SECT. LXXXIV.

According to the motion which the Epicureans aſſign to atoms, they can never compoſe any body.

THESE atoms, of ſo many various and odd figures, curved, hooked, round, or angular, are by their eſſence obliged always to move in a right line, without ever deviating or inclining either to the right or the left. They can never, therefore, hook or entangle one another; nor compoſe a body by their union together. Put as many hooks as you pleaſe, as near as you pleaſe to one another, and let them be ever ſo well adapted to catch hold; yet, if every one of them muſt for ever move in a line perfectly ſtrait, they will move eternally near one another in parallel lines, without once joining or cohering

together. The two ſtrait lines, which are ſuppoſed to be parallels, tho' ever ſo near neighbours, will never croſs each other, ſhould you carry them on to infinity. Even eternity itſelf could not therefore produce any contact, any faſtening of theſe hooks in one another; nor conſequently any compoſition, from this motion of atoms in a direct line.

SECT. LXXXV.

The clinamen or inflexion of atoms in their courſe, is a mere chimera; which plunges the Epicureans into a groſs contradiction.

THE Epicureans, not being able to ſhut their eyes againſt the evidence of this objection, which ſaps the foundation of their whole ſyſtem, have had recourſe to another invention, as their laſt reſort. This is what Lucretius calls the clinamen; a word that ſignifies a motion

motion ſomewhat declining from a right line, and which gives to atoms the means of croſſing and intercepting each other. Thus they turn them at their pleaſure, and juſt as their imagination ſuggeſts the moſt plauſible method of coming to their point. But where are they taught this declination of atoms, which comes in ſo opportunely to ſave their ſyſtem? If a ſtrait line in motion be eſſential to bodies, nothing can divert, incline, nor conſequently join them, to all eternity. This clinamen violates the very eſſence of matter, and leads our philoſophers into the moſt ſhameful contradiction. If, on the contrary, a right line in motion be not eſſential to all bodies, why do they ſo confidently attack us with their eternal, neceſſary, and immutable laws of motion in atoms, without recurring to a firſt mover? And why do they build a whole ſyſtem of philoſophy upon the precarious founda-

tion of a ridiculous fable? Without the clinamen, the right line can never effect any thing, and the whole ſyſtem falls to the ground. With the clinamen, an invention not leſs fabulous than thoſe of the poets, the right line is broke in upon, and the ſyſtem becomes ridiculous.

BOTH the one and the other, the right line and the clinamen, are wild ſuppoſitions, and empty dreams: but thoſe two dreams mutually deſtroy each other. This is the final reſult of that unbridled licence which ſome men take, when they ſuppoſe, whatever their imagination ſuggeſts to them in ſupport of a fable, to be an eternal truth; while they refuſe to acknowledge that art, by which all the parts of the univerſe were formed, and diſpoſed in their preſent beautiful order.

SECT.

SECT. LXXXVI.

A ſtrange abſurdity of the Epicureans, who pretend to account for the nature of the ſoul by the declination of atoms.

TO complete our wonder, and their own extravagance, the Epicureans have dared (ſince all other means have failed them) to explain by this clinamen, which in itſelf is inexplicable, that which we call the ſoul of man, and his free-will. Yes, they are at laſt reduced to the neceſſity of affirming, that it is in this motion, which keeps the atoms in a kind of equilibre betwixt a ſtrait line and a line ſomewhat curve, that the human will conſiſts. How ſtrange is this philoſophy, which teaches, that if atoms move only in a right line, they are inanimate, incapable of every degree of knowledge, and of will; but the ſame atoms,

atoms, if they make but a ſmall declination from that line, are once animated, capable of thought, and rational! They are themſelves intelligent ſouls, ſelf-knowing, ſelf-conſcious: they reflect, they deliberate, they are free in their actions and determinations. Was a more abſurd metamorphoſis ever invented? What would become of religion, what a handle would be given to infidels, if, in order to prove it, we were obliged to proceed on principles ſo puerile and falſe, as thoſe of that philoſophy which dare to attack it ſeriouſly and in earneſt?

SECT.

Sect. LXXXVII.

The Epicureans ſhut their own eyes when they endeavour to explain the liberty of man by the inflexion of atoms.

BUT let us obſerve how far theſe philoſophers impoſe on their own underſtandings. What is it they find in their clinamen, that can with the leaſt air of probability account for the liberty of man? This liberty is not imaginary: we muſt doubt of every thing that is moſt certain, and of which we are the moſt intimately conſcious and ſenſible, if we call in queſtion our own free-will. I am conſcious that when I riſe, in order to walk, I am free to continue ſitting. I perceive this with ſuch fulneſs of certainty, that it is not in my power ever to doubt of it ſeriouſly. I ſhould give the lye to my own ſentiments, if I preſumed to dare

dare aſſert the contrary. Can religion have a more evident and indiſputable proof than this? We cannot doubt of the exiſtence of GOD, unleſs we doubt of our own liberty. From whence I infer, that no man can doubt in earneſt of the exiſtence of GOD, ſince no man can harbour a ſerious doubt with regard to his own liberty. On the contrary, if it be frankly and candidly acknowledged, that men are truly free; nothing is more eaſy than to demonſtrate, that the liberty of the human will cannot conſiſt in any combination of atoms, without admitting a firſt mover, who impoſed on matter arbitrary laws for its motion. Otherwiſe, motion muſt be eſſential to bodies, and all the laws of motion muſt be as neceſſary as the eſſences of corporeal natures. According to this ſyſtem, then, all the motions of bodies muſt be performed by conſtant, neceſſary, and immutable laws. The motion

motion in a right line muſt be eſſential to all atoms, that are not diverted from it by the concurrence of other atoms: this ſtrait line ought to be eſſential in ſome certain, fixed, immutable direction; either upwards or downwards, from right to left, from left to right, or in a diagonal from ſome preciſe point. Beſides, it is evident, that no one atom can divert another from its courſe: for that other atom bears alſo in its eſſence the ſame eternal and invincible determination, which in the ſame manner reſtrains it to the direct line. From whence it follows, that all the atoms, diſpoſed at firſt on different lines, muſt purſue to infinity thoſe parallel directions, without ever coming nearer to the contact of each other; and that thoſe that are in the ſame line muſt eternally follow, without overtaking one another; but ſtill preſerving the ſame exact diſtance, with which they began to move. The clinamen,

men, as we have already ſhewn, is manifeſtly impoſſible: but ſhould we ſuppoſe, contrary to the cleareſt evidence of truth, that it was poſſible, we ſhould then be obliged to aſſert, that the clinamen is not leſs neceſſary, immutable, and eſſential to atoms, than the right line itſelf. And will any one pretend to ſay, that the true liberty of man can be explained by a neceſſary, eſſential, and immutable law concerning the local motion of atoms? Does not every one ſee, that it is no better accounted for by the clinamen, than by the right line? Were the clinamen true, it muſt be as neceſſary as the perpendicular line, by which a ſtone falls from the top of a tower into the ſtreet. Is that ſtone free in its fall or deſcent? Now the will of man, upon the principle of the clinamen, is not more free than the ſtone. Is it by ſuch poſitions as theſe that man dares to give the lye to his own conſcience, on

the

the ſubject of his own free-will, that he may not be obliged to acknowledge his GOD? To ſay, on the one hand, that the liberty of man is imaginary, we muſt ſilence the voice, and ſtifle the ſentiments of nature; we muſt ſhamefully give the lye to our own perceptions, and deny that truth, of which we are the moſt intimately certain; in a word, we muſt prevail on ourſelves to believe, that we have no choice betwixt two objects, even when we deliberate on them with the utmoſt attention and ſeriouſneſs. Nothing is more glorious to the cauſe of religion, than thoſe monſtrous abſurdities, and groſs contradictions, which men of neceſſity fall into, whenever they call in queſtion the divine truths which ſhe teaches! On the other hand, to confeſs that man is truly free, is to acknowledge in him a principle, which can never be ſatisfactorily explained by the combinations of atoms, or

the

the laws of local motion; ſince theſe combinations and laws, if we once deny a firſt mover, muſt be all ſuppoſed equally neceſſary, and eſſential to matter. We muſt therefore ſoar beyond the whole ſyſtem of matter, and far remote from the combinations of atoms ſearch for ſome incorporeal principle, in order to account for the freedom of the human will, if we admit it in earneſt. Whatever is matter, whatever we can call an atom, moves only by laws that are neceſſary, immutable, and irreſiſtible: liberty, therefore, cannot be found, either in bodies, or in any local motion: and the conſequence is, that we muſt look for it in ſome incorporeal being. This incorporeal being, which muſt neceſſarily be in me, united to my body; by whoſe hand was it bound, and ſubjected to the organs of this corporeal machine? Where is that artificer, who unites together natures ſo very different? Muſt it not

be

be a power, ſuperior both to bodies and ſpirits, which can hold them firm in this union, with ſo abſolute a ſway? "Two "hooked atoms, ſays an Epicurean, lay "hold of one another." But this very fact is falſe, according to his own ſyſtem: for I have demonſtrated, that theſe hooked atoms can never faſten on each other, becauſe it is impoſſible they ſhould ever meet. After this, however, having allowed theſe two atoms to hook one another, and ſo become united; the Epicurean muſt ſtill acknowledge, that the thinking being, which is free in its operations, and of conſequence not a mere texture of atoms, for ever moved by neceſſary laws, is incorporeal, and could not, by any particular configuration of it, be hooked into union with the body it animates. Thus, the Epicurean, which way ſoever he turns, deſtroys his own ſyſtem with his own hands. But let us be careful that we do

not, by any means, perplex and confound men who err; ſince we are men as well as they, and not leſs ſubject to error. Let us only compaſſionate their caſe, and ſtudy, with patience, to enlighten and edify them. Let us pray for their conviction, and yet perſevere in aſſerting the truth, which appears with ſuch ſtrong evidence.

SECT. LXXXVIII.

It is neceſſary to acknowledge the hand of a firſt cauſe in the univerſe, without inquiring whether that firſt cauſe has left any defects in his work.

THUS the ſtamp of the divinity appears upon every thing in the univerſe: the heavens, the earth, vegetables, animals, and men more than all the reſt, viſibly bear it. The whole ſhews us a fixed deſign, a concatenation of ſubordinate

ſubordinate cauſes, which are all conducted with order by one ſuperior cauſe.

It is by no means our buſineſs to criticiſe this great work. The defects which are found in it, proceed either from the licentious and diſorderly will of man, which produces them by its irregularity; or from the ever holy and juſt will of God, who ſometimes hath a mind to puniſh incredulous men, and at other times to exerciſe and perfect the good by means of the wicked. Nay, it often happens, that that which ſeems a defect to our limited underſtandings, in ſome ſeparate and diſtinct part of the work, is really an ornament with reſpect to the general deſign; which we are not able to ſurvey with views ſufficiently extenſive, and at the ſame time ſufficiently ſimple to comprehend the perfection of the whole. Does it not happen every day, that we raſhly cenſure

certain parts of human workmanſhip, for want of having a thorough inſight into the full deſign of the artiſt? This is particularly true with regard to the works of painters, and architects. If the characters we uſe in writing were of immenſe magnitude, every character at cloſe view would take up the whole compaſs of a man's ſight; ſo that it would be impoſſible for him to ſee more than one at once. He would find it impracticable, in this caſe, to read, that is, to join ſeveral characters together, and diſcover the ſenſe of all thoſe characters united. It is juſt the ſame with the large ſtrokes of providence, which it forms in the conduct of the whole world, during a long ſucceſſion of ages. There is nothing intelligible but the whole, and that whole is too vaſt to be comprehended in a cloſe view. Every event is like a particular character, which is too large for our minute and contracted or-

gans;

gans; and which ſignifies nothing alone, diſtinct from the reſt. When at laſt, in the comſummation of ages, we ſhall ſee in GOD, that is, in its true point of view, the total of human events, from the firſt to the laſt day of created nature, together with their proportions in regard to the deſigns of GOD, we ſhall cry out with tranſport, "Lord, thou alone art "juſt and wiſe!" A true judgment cannot be formed of the works of man, without examining the whole: every part ought not to have every perfection; but only that which ſuits it in the place it muſt occupy, and which juſtly belongs to it in proportion to the other parts, which with it compoſe the whole. In a human body, for example, all the parts muſt not be eyes; becauſe hands and feet are alſo neceſſary. In the univerſe, there muſt be a ſun for the day; but then there muſt be a moon alſo for the night. "A perfect univerſality cannot

" appear to us, unleſs the greater parts " be in ſuch manner preſent, that the " leſſer are not wanting or hidden*." In this manner we ought to judge of every part, with reſpect to the whole. Any other view is defective and fallacious. But what are the feeble deſigns of men, if we compare them with that deſign, by which the world was created, and hath ever ſince been governed? GOD himſelf tells us, in the ſcriptures, " As " far as the heavens are above the earth, " ſo far are my ways above your ways, " and my thoughts above your thoughts. Let man, therefore, admire that which he underſtands, and wonder in ſilence at thoſe things which he does not comprehend. But, after all, the real defects in this work (for ſuch we muſt admit) are only imperfections which the Almighty was

* Nec tibi occurrit perfecta univerſitas, niſi ubi majori ſic præſto ſunt, ut minora non deſint. AUG. de Lib. Arbit.

was pleaſed to leave in it, to remind us that he called forth the whole out of nothing. There is not any thing in the univerſe but what does and ought to bear, equally imprinted on it, theſe two oppoſite characters: on one ſide, the ſeal or ſtamp of the infinite artiſt upon his work; and on the other, the mark of that original nothing from which it was extracted, and into which it may again fall every moment. It is an incomprehenſible mixture of meanneſs and grandeur; of frailty in the matter, and art in the workmanſhip. The hand of GOD is conſpicuous in every thing, even in a worm that crawls upon the earth: at the ſame time imperfection and nothingneſs every where appear, even in the moſt comprehenſive and ſublime genius. All that which is not GOD, can have but a limited perfection: and that which has but a limited perfection, remains always imperfect on the ſide where the

boundary is perceptible, and denotes a poſſibility of addition and improvement.* The creature would be the creator himſelf, if it wanted nothing: for it would then have the fulneſs of perfection which is the divinity itſelf. But as ſoon as it falls ſhort of infinity, it neceſſarily becomes bounded in perfection; or, in other words, it is imperfect on one ſide or the other. It may have a greater or ſmaller degree of imperfection; but, after all, it muſt ſtill be imperfect. Are we capable, at any time, to point out the very place in which it is defective? Are we able to examine it critically, and to ſay, this or that addition it might have had, which is now wanting to it?

* Aug. de ordine.

SECT. LXXXIX.

A compariſon between the defects of the univerſe, and thoſe of a picture.

WE ſee ſhades, and even ſome careleſs touches of the pencil, in a piece of painting: do we from thence conclude, that chance was the author of this picture? The painter, we naturally ſay, might have given a higher finiſhing to this fleſh, to thoſe draperies, and to that back-ground. The picture is not perfect, nor exactly conformable to the rules of art. But what madneſs would it be to infer, that, becauſe the picture is not abſolutely perfect, therefore it is all a mixture of colours thrown together by chance, and without any aſſiſtance from the hand of a painter? Yet, though a man would bluſh to ſay this of a bad picture, on which very little art

art had been beſtowed; there are men not aſhamed to affirm as much of the univerſe, in which a crowd of incomprehenſible wonders ſhine forth, with the utmoſt order and proportion. Let us ſtudy the world as much as we pleaſe; let us be ever ſo particular in the detail of our inquiries; let us diſſect even the vileſt of animals; let us carefully conſider the ſmalleſt grain of corn ſown in the earth, and the manner in which it ſhoots forth and multiplies; let us attentively obſerve with what precautions a roſe-bud opens and expands itſelf before the ſun, and cloſes up again towards night: we ſhall find in each of theſe a deeper deſign, a more artful conduct, and more vigilant induſtry, than in all the works of human art. Nay, even that which we call human art in general, is nothing but a feeble imitation, which men fall into, of that great art called the laws of nature, which the impious

are not aſhmed to diſtinguiſh by the name of blind chance. Ought we to wonder, therefore, that the poets have animated the whole univerſe; that they have given wings to the wind, and arrows to the ſun; that they have painted rivers as impetuouſly haſtening to precipitate themſelves into the ſea, and trees as ſhooting up their branches towards heaven, in order to ſubdue and quell the rays of the ſun by the denſity of their ſhades? This figurative kind of expreſſion has even been admitted into the language of the vulgar; ſo natural is it for men to be ſtruck with that art, of which all nature is full. All that poetry did, was to aſcribe to inanimate creatures the deſigns of the creator, who operates all things in them. From the figurative language of the poets, the ſame ideas were tranſplanted into the theology of the Heathens, whoſe divines thoſe poets were. They ſuppoſed an art, a power, a wiſdom,

dom, ſomething which they denoted by the word *numen*, even in creatures the moſt devoid of underſtanding. With them rivers were gods, and fountains were nymphs, by the name of naiades; woods and mountains had their particular divinities; flowers had their Pan, and fruits their Pomona. In ſhort, the more we contemplate nature, without prejudice, the more we diſcover in her an inexhauſtible ſource of wiſdom, which is, as it were, the ſoul of the univerſe.

SECT. XC.

We muſt of neceſſity conclude, that there is a firſt being who formed the univerſe.

WHAT is the reſult of all this? The inference ſtrikes us, without ſearching for it. If, as Minutius Felix obſerves, ſo much wiſdom and penetration are requiſite, only to obſerve the marvellous

vellous order and deſign of the ſtructure of the univerſe; how much more, by parity of reaſon, was neceſſary to form this univerſe? If philoſophers are ſo much admired, becauſe they diſcover only a ſmall part of the ſecrets of that wiſdom, which made all things; ſurely man muſt be blind indeed, who does not admire that wiſdom itſelf!

SECT. XCI.

Reaſons why men do not diſcover GOD *in the univerſe, when he exhibits himſelf to them as in a faithful mirror.*

THUS have we tranſiently ſurveyed the great object of the univerſe, wherein GOD, as in a glaſs, ſhews himſelf to human kind. But there were ſome men, known by the name of philoſophers, whoſe heads were turned with their own thoughts, and who converted every

every thing to the uſe and ſervice of their own vanity. By mere dint of ſubtle reaſoning they overſhot the mark, and loſt ſight of an obvious truth, which every man finds naturally and ſimply in himſelf, without the aid of philoſophy.

OTHERS, intoxicated by their paſſions, live in a perpetual diſtraction and diſſipation of thought. In order to perceive GOD in his works, it is neceſſary, at leaſt, that we ſhould conſider them with attention. But paſſions blind men to ſuch a degree, not only the wild and ſavage, but even thoſe nations which ſeem to be moſt civilized and polite, that they do not ſo much as ſee the very light that ſhines around them. In this reſpect, the Egyptians, the Greeks, and the Romans, were not leſs blind, or leſs brutal, than the more rude and uncultivated Indians. Like theſe ſavages, they were wholly ſunk and buried in ſenſible things,

things, without aſcending higher. They cultivated their intellectual faculties only to indulge themſelves in ſofter ſenſations, not regarding the ſource from whence thoſe enjoyments flowed. It is in this manner that men in general wear away the time they live on earth. If you ſay nothing to them, they think of nothing, except of ſuch ſubjects as flatter their vanity, or their ſenſual paſſions. Their ſouls grow ſo heavy and unwieldy, that they cannot elevate themſelves to any incorporeal object. Whatever is not palpable, or which cannot be ſeen, taſted, heard, felt, or related, ſeems to them altogether chimerical. This weakneſs of ſoul, when it improves into infidelity, they conſider as ſtrength of mind, and freedom of thought: their vanity applauds itſelf for that perverſeneſs, which conſiſts in oppoſing that which naturally ſtrikes and affects the reſt of mankind. In this they have juſt as much reaſon

as

as a monſter would have, who ſhould pride himſelf that he was not formed according to the common laws of nature; or a man born blind, who ſhould triumph in his incredulity with regard to light and colours, which he was aſſured that other men ſaw and diſtinguiſhed.

A PRAYER to GOD.

'O My GOD! if there are ſo many
'men who do not diſcover thee
'in this beautiful ſpectacle, this proſpect
'which thou giveſt them of univerſal
'nature, it is not becauſe thou art far
'diſtant from any of us: every one of
'us doth, as it were, touch thee with
'his hand: but the ſenſes, and the paſ-
'ſions which they excite, engroſs all the
'attention of our minds. Thus, O
'Lord, thy light ſhineth in darkneſs,
'but the darkneſs comprehendeth it not,
'ſo thick and gloomy are its ſhades.
'Thou ſheweſt thyſelf every-where;
'and every-where inattentive men ne-
'glect to perceive thy preſence. All
'nature ſpeaks of thee, and reſounds
'with thy holy name: but ſhe ſpeaks
'to men that are deaf, and who owe
'their deafneſs to the noiſe and diſtrac-

‘ tion they raiſe about themſelves. Thou
‘ art near, thou art even within them.
‘ But they wander out of themſelves,
‘ and are fugitives from their own breaſts.
‘ O thou ſweet light! Thou eternal
‘ beauty! Thou antient of days, yet
‘ ever young! Thou fountain of chaſte
‘ delights! Thou pure and happy life
‘ of all thoſe who truly live! they would
‘ find thee, they could not miſs thee, if
‘ they did but ſearch for thee within
‘ themſelves. It is only by loſing them-
‘ ſelves, that the impious loſe thee. Alas!
‘ the very gifts, which viſibly and con-
‘ tinually flow from thy bountiful hand,
‘ amuſe them to ſuch a degree, that
‘ they ſee not the fountain from whence
‘ they flow. It is from thy goodneſs
‘ they live, and yet they live without
‘ thinking of thee; or rather, they die
‘ in the midſt of life, for want of nou-
‘ riſhing themſelves with thy preſence:
‘ for what death can there be more
‘ deplorable,

'deplorable, than the being ignorant of
'thee? They fall aſleep in thy tender
'and paternal boſom; and while they
'are full of the deceitful dreams, which
'agitate them in this ſtate of abſence,
'they are inſenſible of the powerful
'hand that ſupports them. If thou
'wert a barren, impotent, and inani-
'mate body, like a flower that fades
'away, a river that runs to waſte, a
'houſe ready to fall with the decays of
'age, a picture conſiſting only of a
'maſs of colours to ſtrike the imagina-
'tion, or an uſeleſs piece of metal, that
'only glitters; they would perceive
'thee, and ſecretly aſcribe to thee the
'power of giving them true pleaſure;
'though, in fact, pleaſure, of which
'thou art the true and only ſpring,
'cannot proceed from inanimate things,
'which have it not in themſelves. Yes,
'O Lord, if thou wert but a groſs,
'frail, lifeleſs being; a lump of matter,

'without virtue or power, and the mere 'ſhadow of exiſtence; thy vain fantaſtic 'nature would employ their vanity, and 'thou wouldeſt be an object propor- 'tioned to their groveling and brutiſh 'thoughts. But becauſe thou * art too 'intimately within them, and they never 'enter within themſelves; thou art to 'them an unknown GOD. For while 'their imagination roves abroad on ex- 'ternal objects, the deep receſs of their 'own minds is of all things the moſt 'remote from their view. That order 'and beauty, which thou ſpreadeſt over 'the face of thy creatures, is like a veil 'that conceals thee from their diſtem- 'pered eyes. O Lord, how is this? 'Does the very light that ſhould illu- 'mine, ſerve only to dazzle and ſtrike 'them blind? Do the rays of the ſun 'hinder them from perceiving the ſun 'himſelf? In fine, becauſe thou art a 'truth

* AUG. Intimior intimo noſtro.

'truth too pure, and too elevated to
'paſs through the medium of our groſs
'ſenſes, men, having debaſed themſelves
'to a level with the beaſts, cannot con-
'ceive thee. And yet thou daily, though
'man diſregards it, giveſt him ſuch
'inſtances of thy power and wiſdom, as
'the evidence of ſenſe could not de-
'monſtrate to him: for thoſe divine
'virtues have neither ſound, colour,
'odour, taſte, figure, nor any ſenſible
'quality. Why then, O my GOD! do
'men doubt rather of thee, than of
'thoſe other very real and manifeſt
'things, whoſe exiſtence they receive as
'a certain truth, in all the moſt ſerious
'affairs of life; and which, nevertheleſs,
'as well as Thyſelf, eſcape their ſenſes?
'O miſerable ſtate! O hideous night,
'that involves in darkneſs the children
'of Adam! O monſtrous ſtupidity! O
'wretched deſolation of GOD's whole
'image! Man hath eyes to behold only
'ſhadows,

'ſhadows, and truth appears to him as 'a phantom. That which in itſelf is 'nothing, is to him every thing: that 'which, in truth, is all, ſeems to him 'as nothing. What do I ſee in the 'whole ſurvey of nature? GOD. GOD 'every-where, GOD ever preſent, and 'ſtill only GOD. When I think, O Lord, 'that all exiſtence is in thee, all my 'thoughts are exhauſted and ſwallowed 'up in contemplation. O thou abyſs 'of truth! I know not whither I ſoar, 'nor what I become. All that is not 'Thou, diſappears; and of myſelf ſcarce 'ſo much remains, as to diſcover to me, 'that I am. He who ſees not Thee, 'hath ſeen nothing: he who doth not 'feel Thee, is a ſtranger to all true ſen-'timent: he exiſts as though he exiſted 'not, and his whole life is no more 'than a dream. Ariſe, O Lord, ariſe! 'Let thy enemies melt like wax, and 'vaniſh like ſmoke before thy face.

'Wo

'Wo to the impious ſoul, who, remote 'from thee, is without GOD, without 'hope, deſtitute of eternal conſolation! 'Happy already is he, who ſearches 'after thee, who pants and thirſts to 'enjoy thee! But completely happy is 'he, upon whom the light of thy coun-'tenance ſhines, whoſe tears thou haſt 'wiped away, and whoſe deſires thy 'love has already accompliſhed! When, 'O Lord, will that time come? O glo-'rious day, without cloud, without 'end! Thou thyſelf ſhalt be the ſun 'to enlighten it, and thy emanations 'ſhall flow through my ſoul in a tor-'rent of delight. In this pleaſing hope 'my bones ſhiver, and cry out, "Who "is like unto thee, O Lord? My "heart melts, and my fleſh faints, O "Thou GOD of my ſoul, and my eter-"nal portion." Amen.

FINIS.

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